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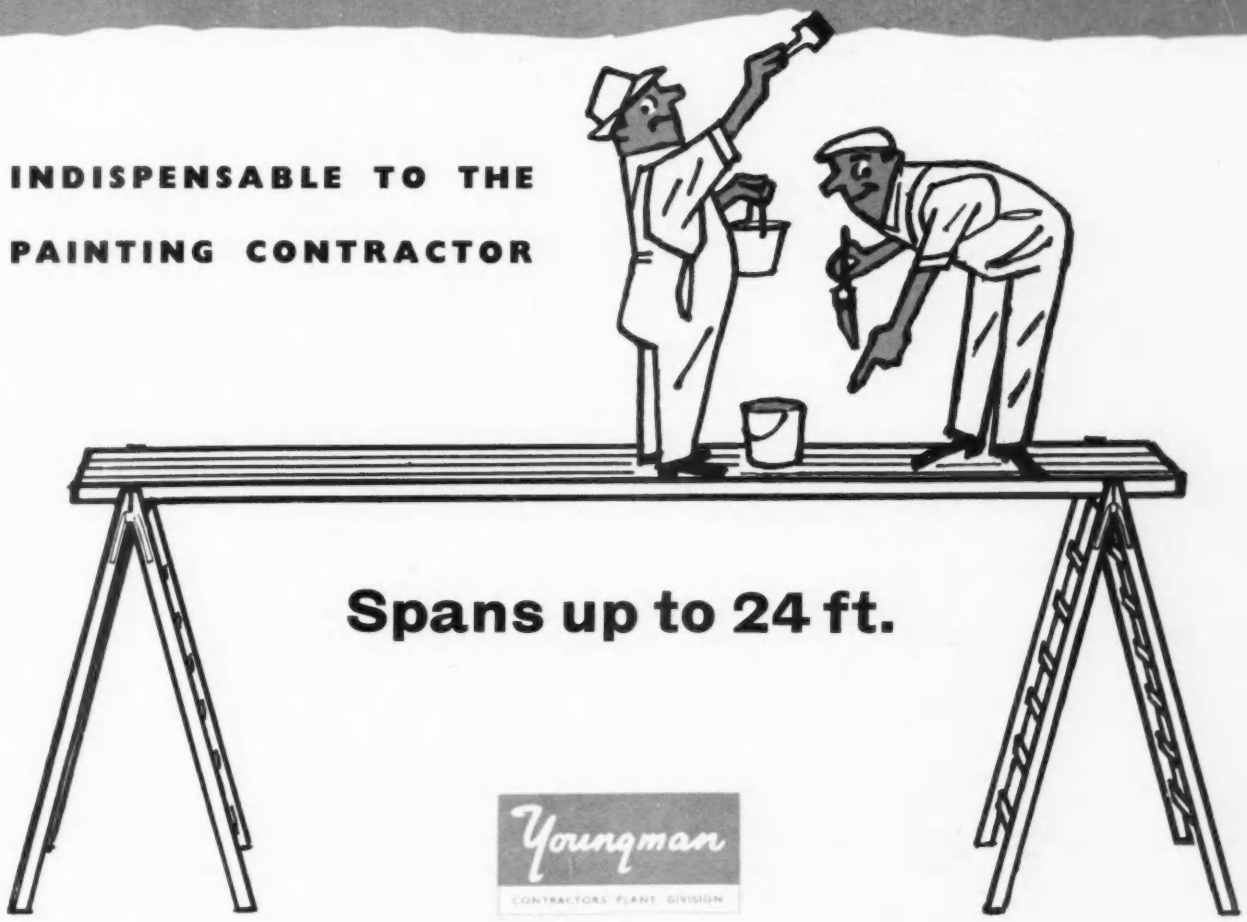

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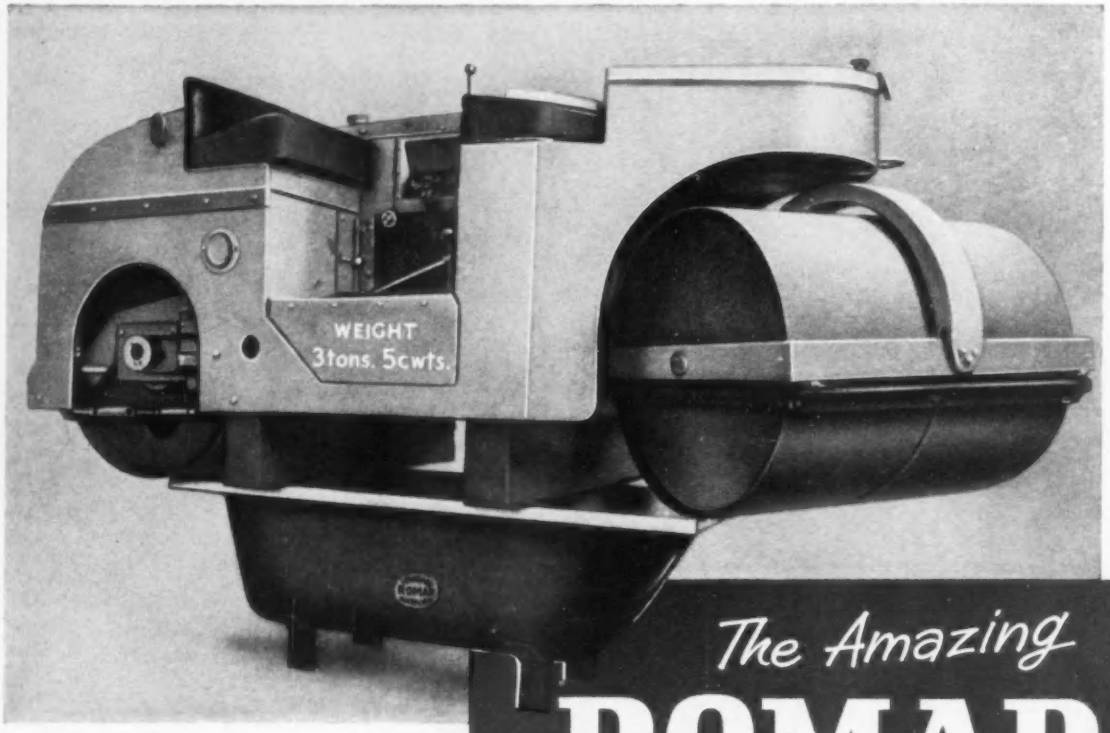

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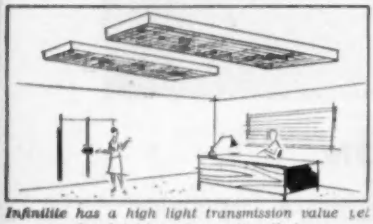

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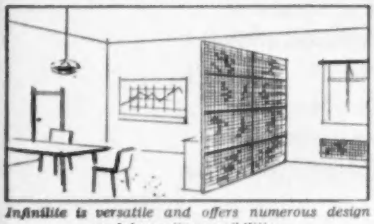

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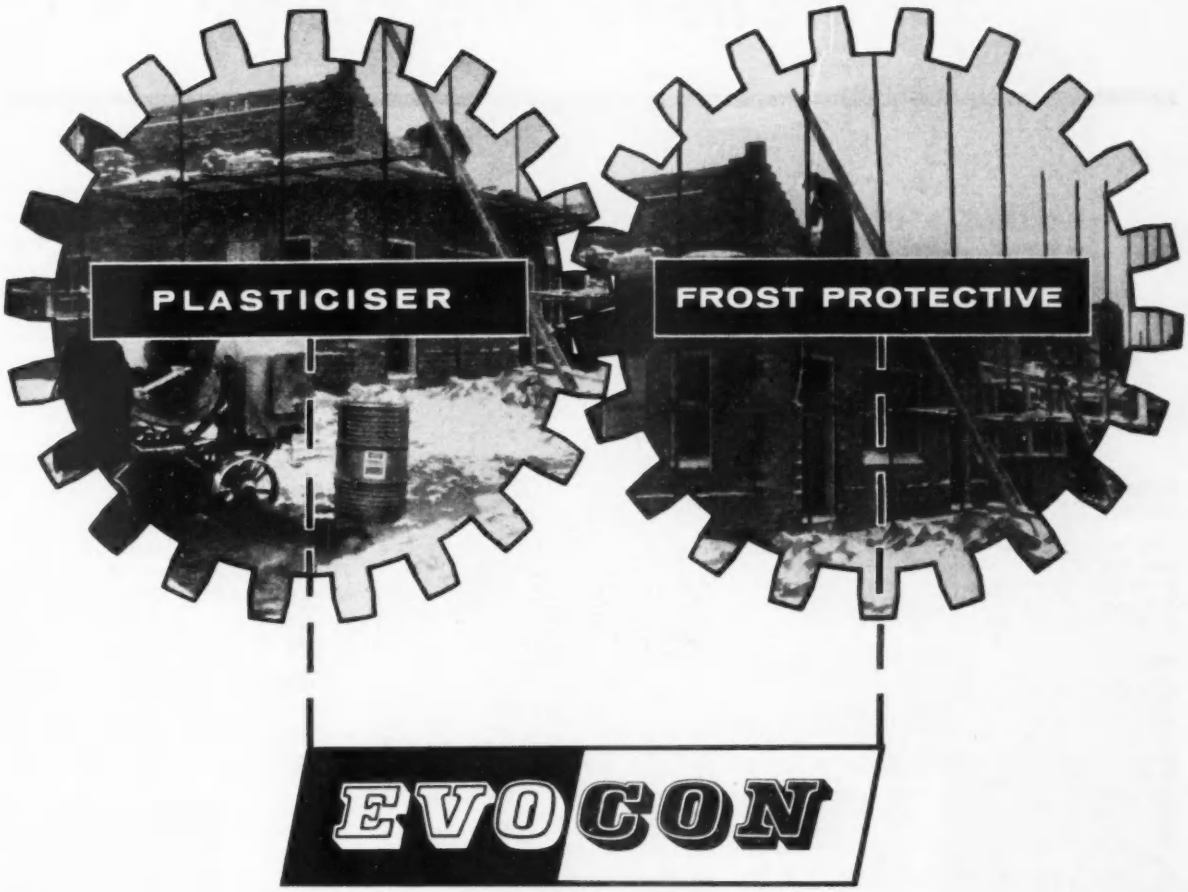

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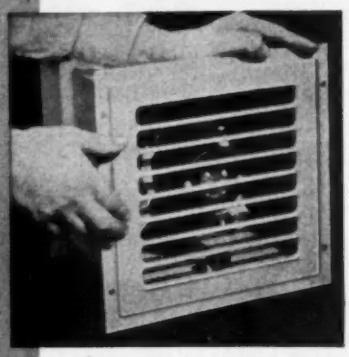

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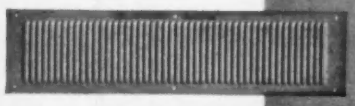

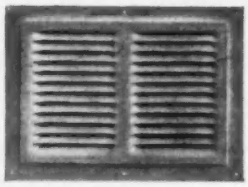

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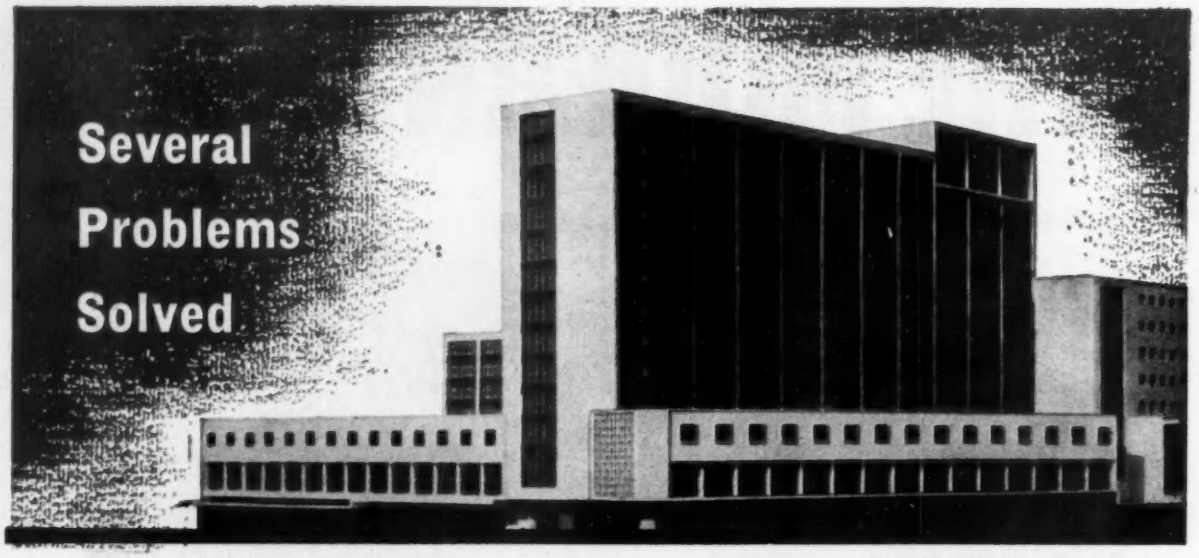

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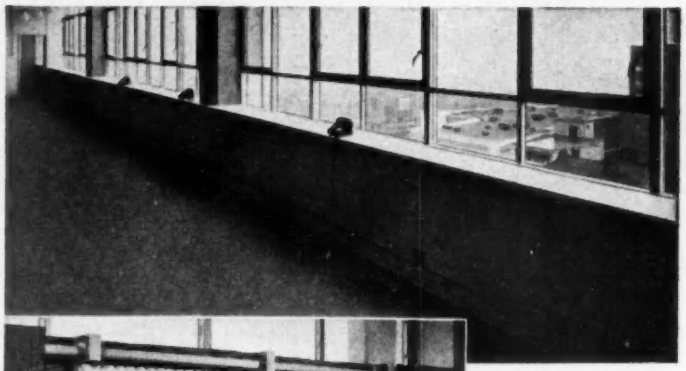

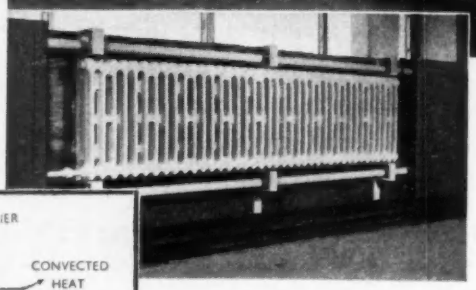

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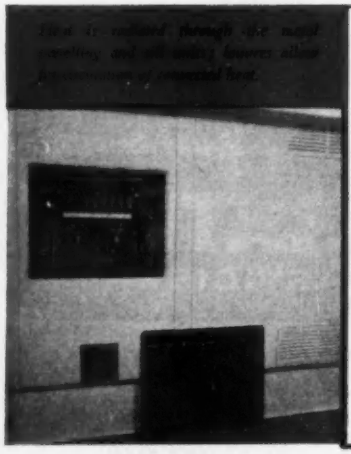

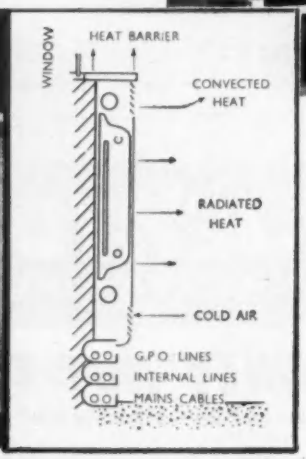

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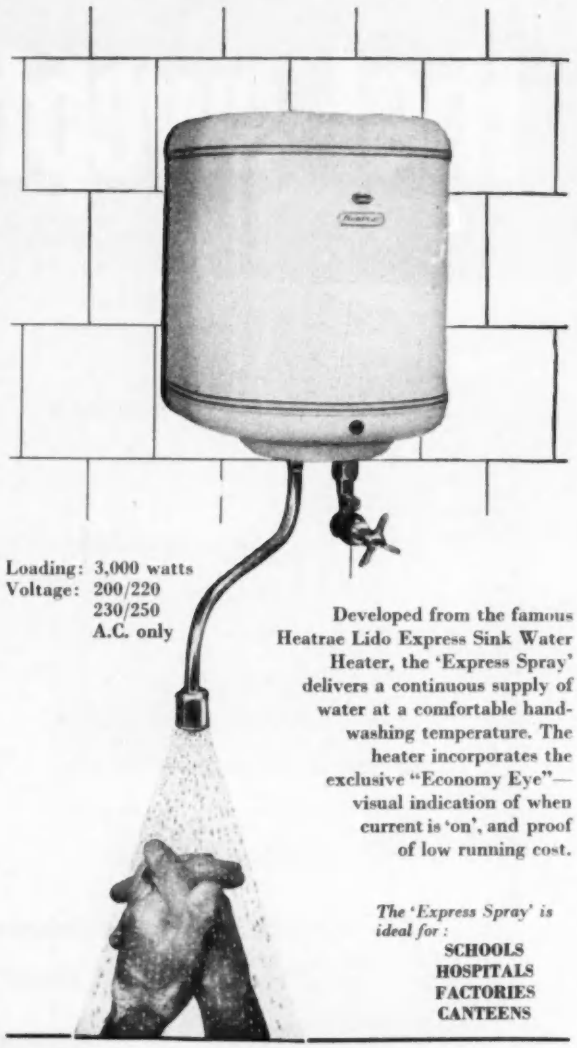

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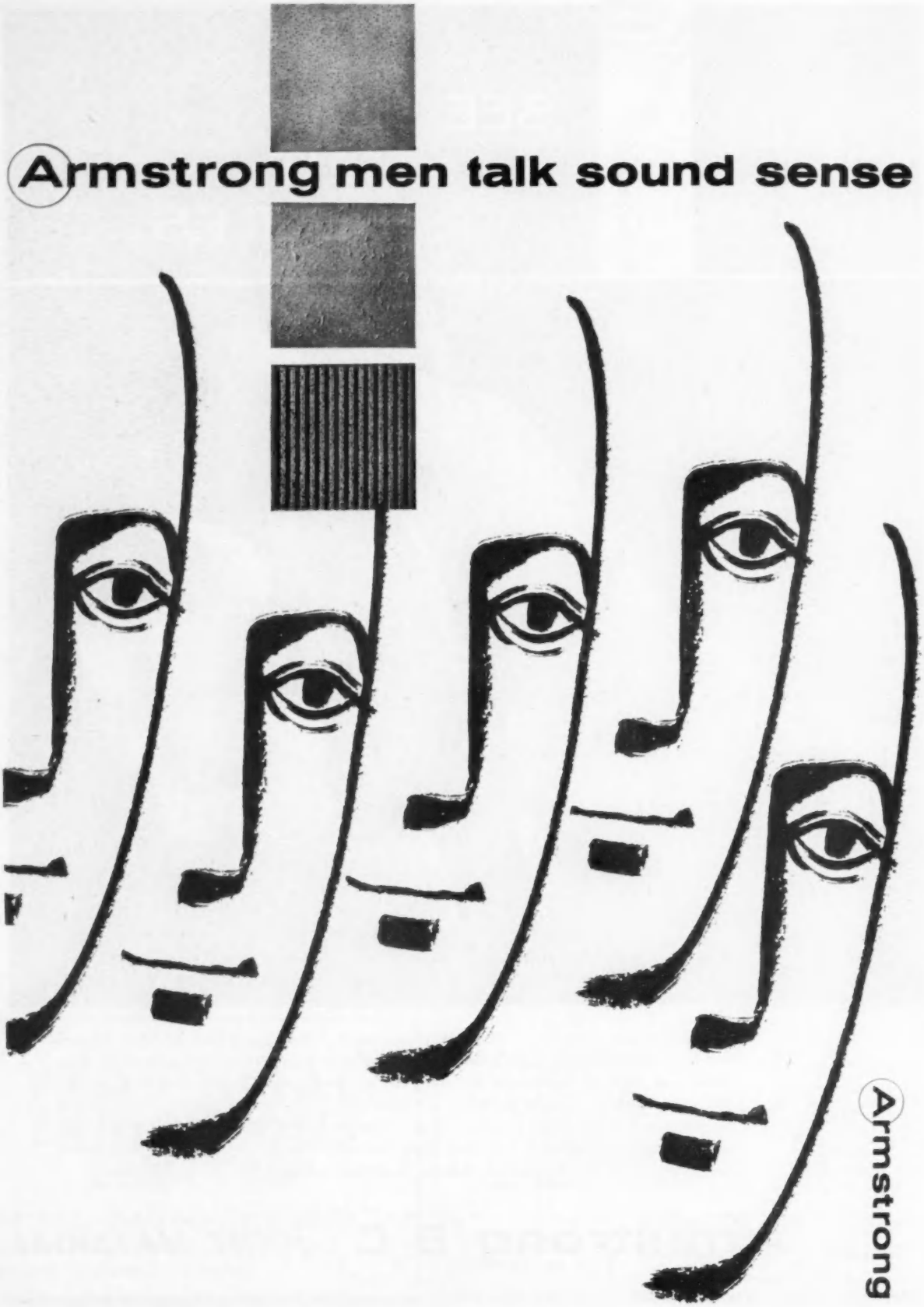
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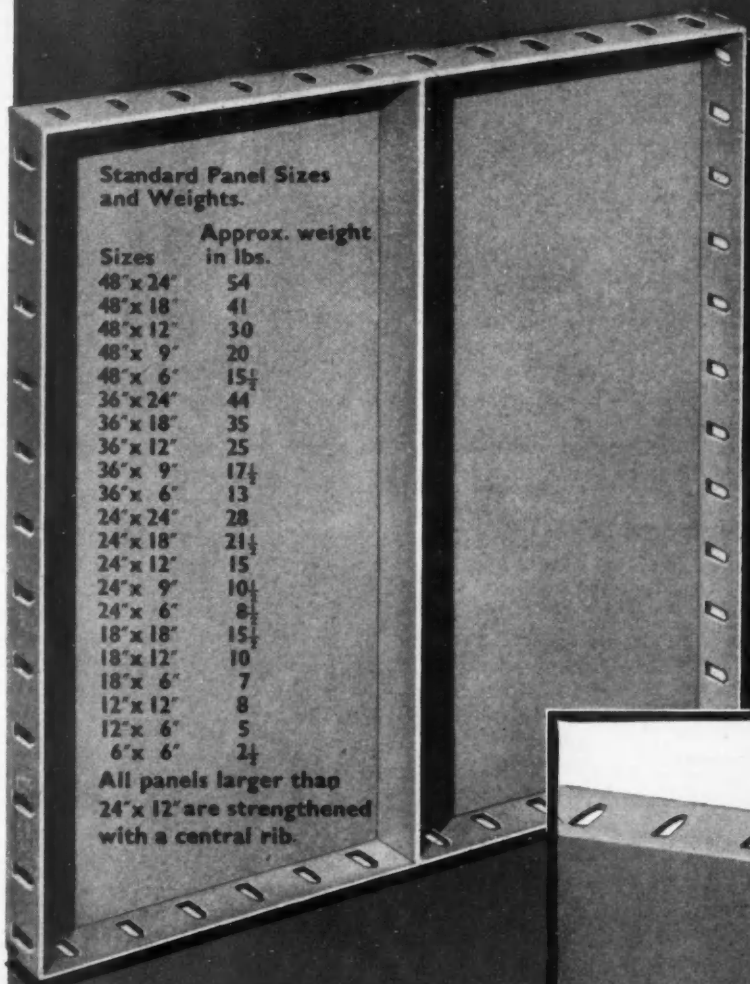

Standard Panel Sizes and Weights.

Sizes	Approx. weight in lbs.
48"x 24"	54
48"x 18"	41
48"x 12"	30
48"x 9"	20
48"x 6"	15½
36"x 24"	44
36"x 18"	35
36"x 12"	25
36"x 9"	17½
36"x 6"	13
24"x 24"	28
24"x 18"	21½
24"x 12"	15
24"x 9"	10½
24"x 6"	8½
18"x 18"	15½
18"x 12"	10
18"x 6"	7
12"x 12"	8
12"x 6"	5
6"x 6"	2½

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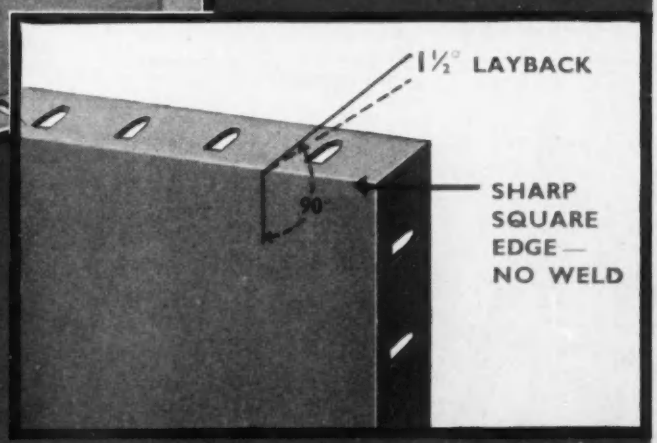

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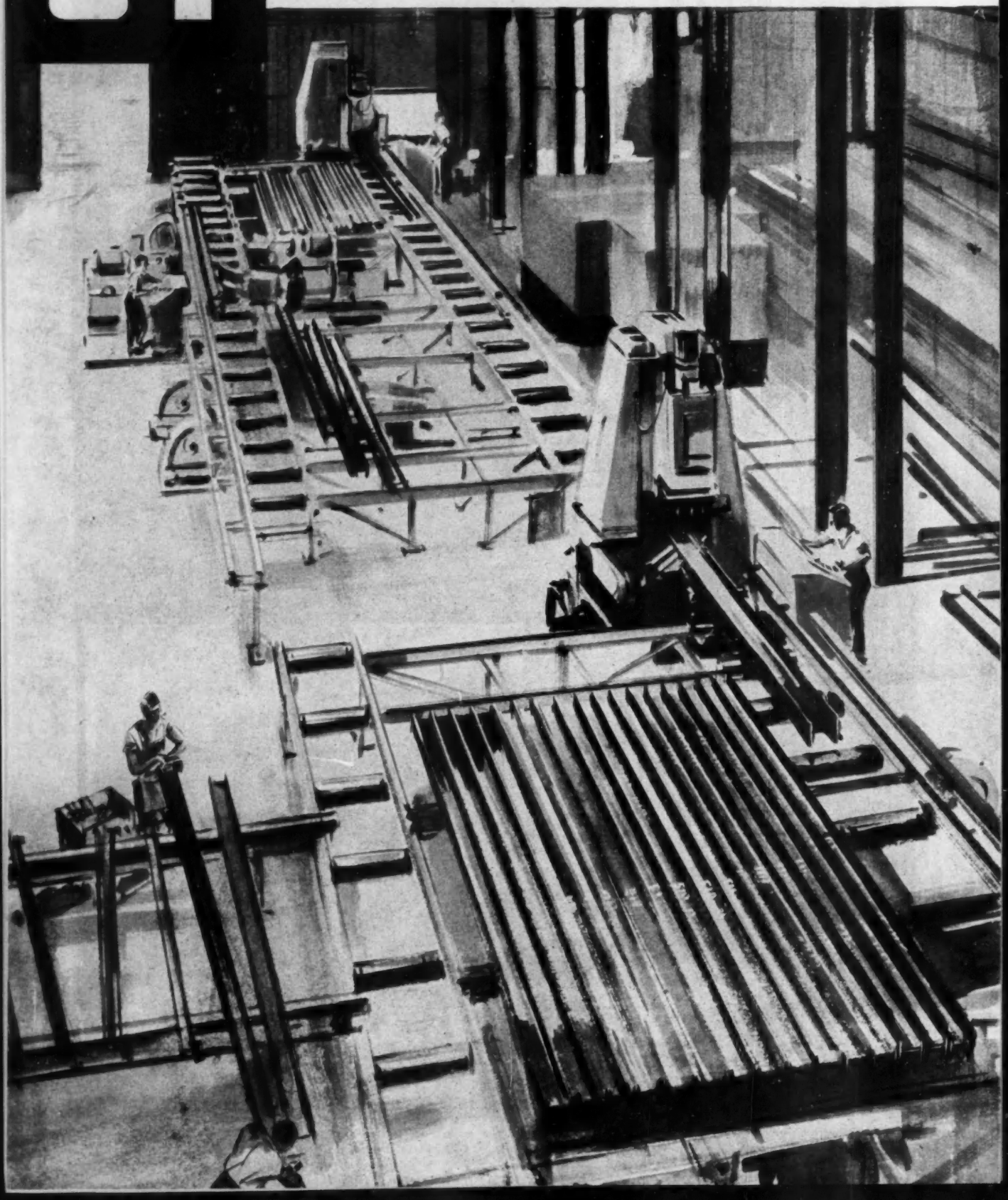

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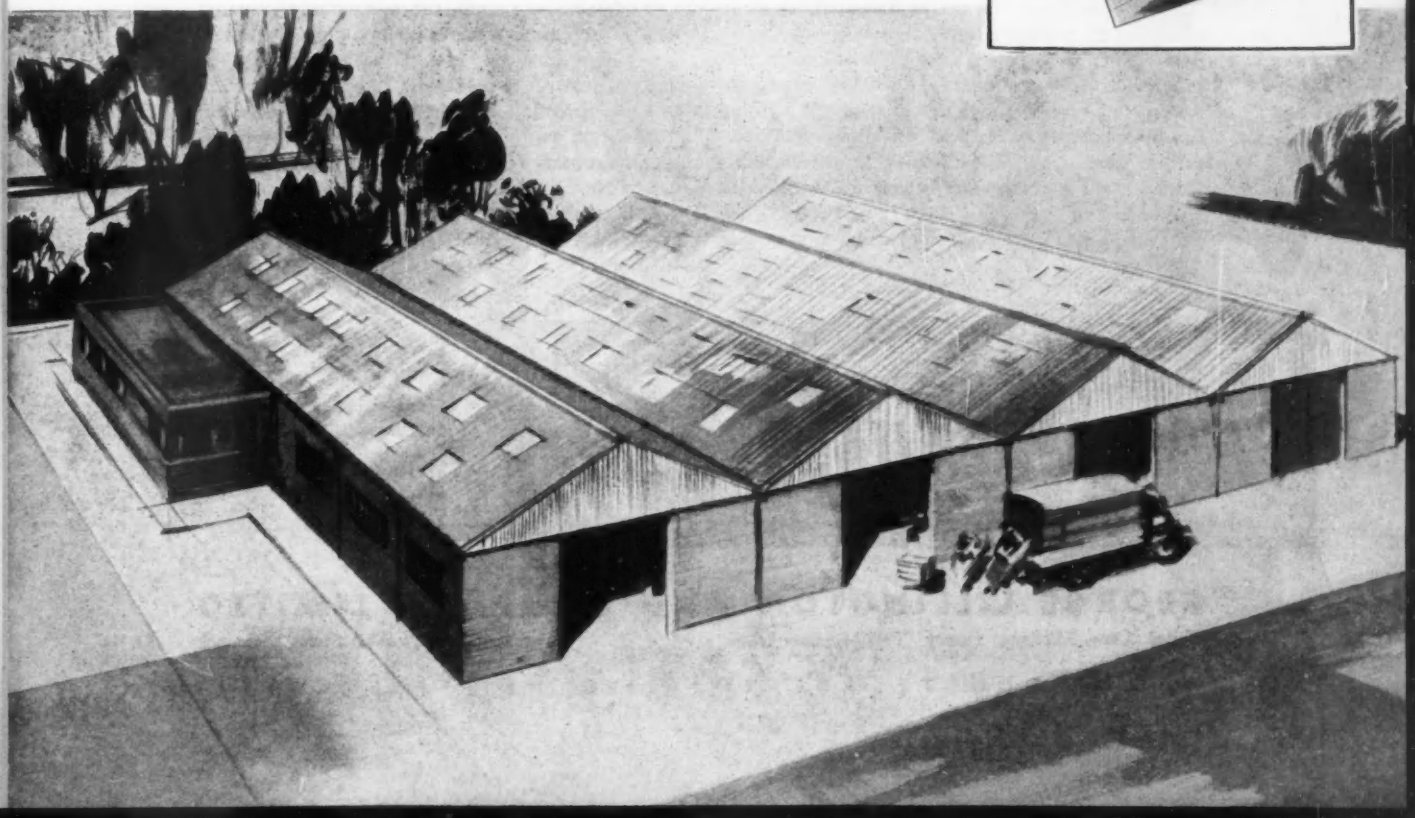

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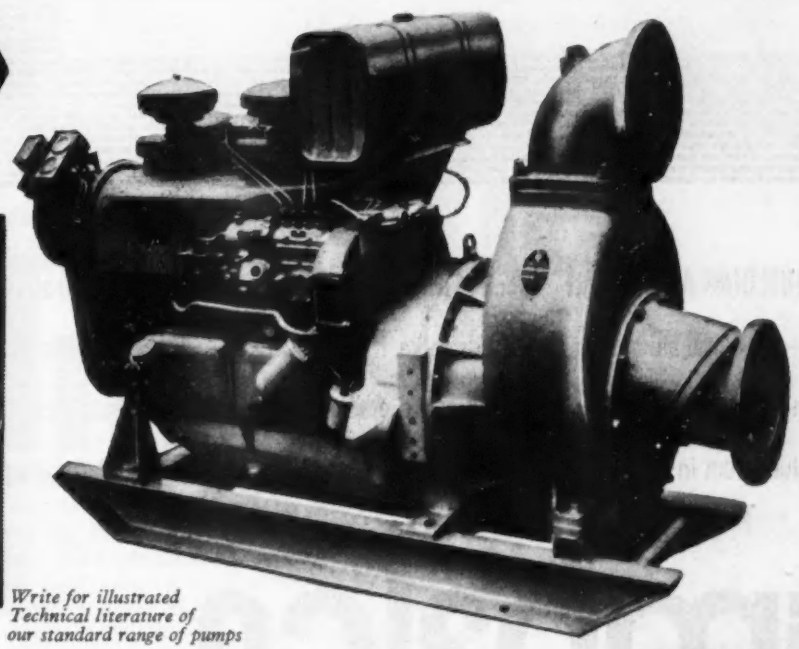

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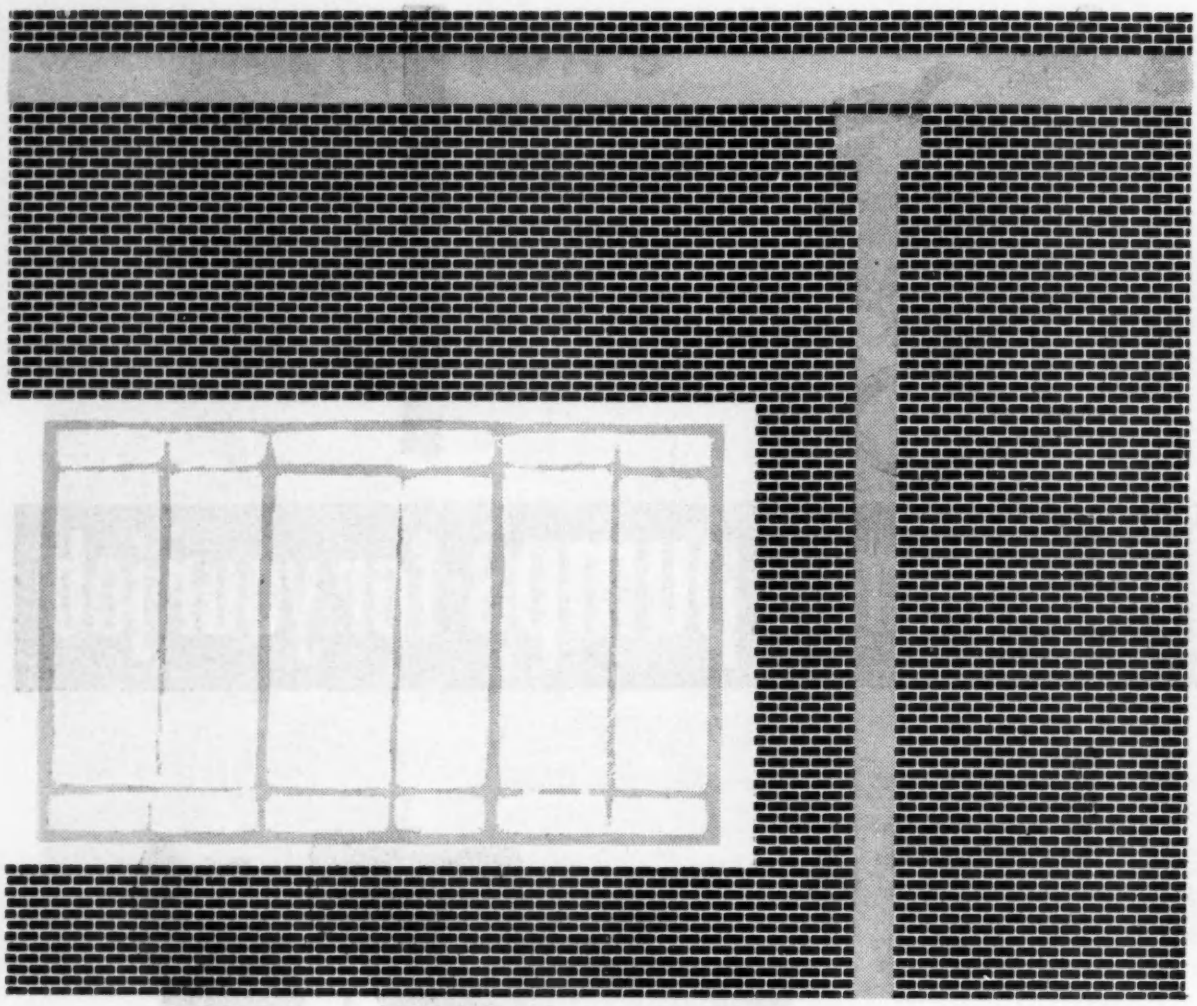

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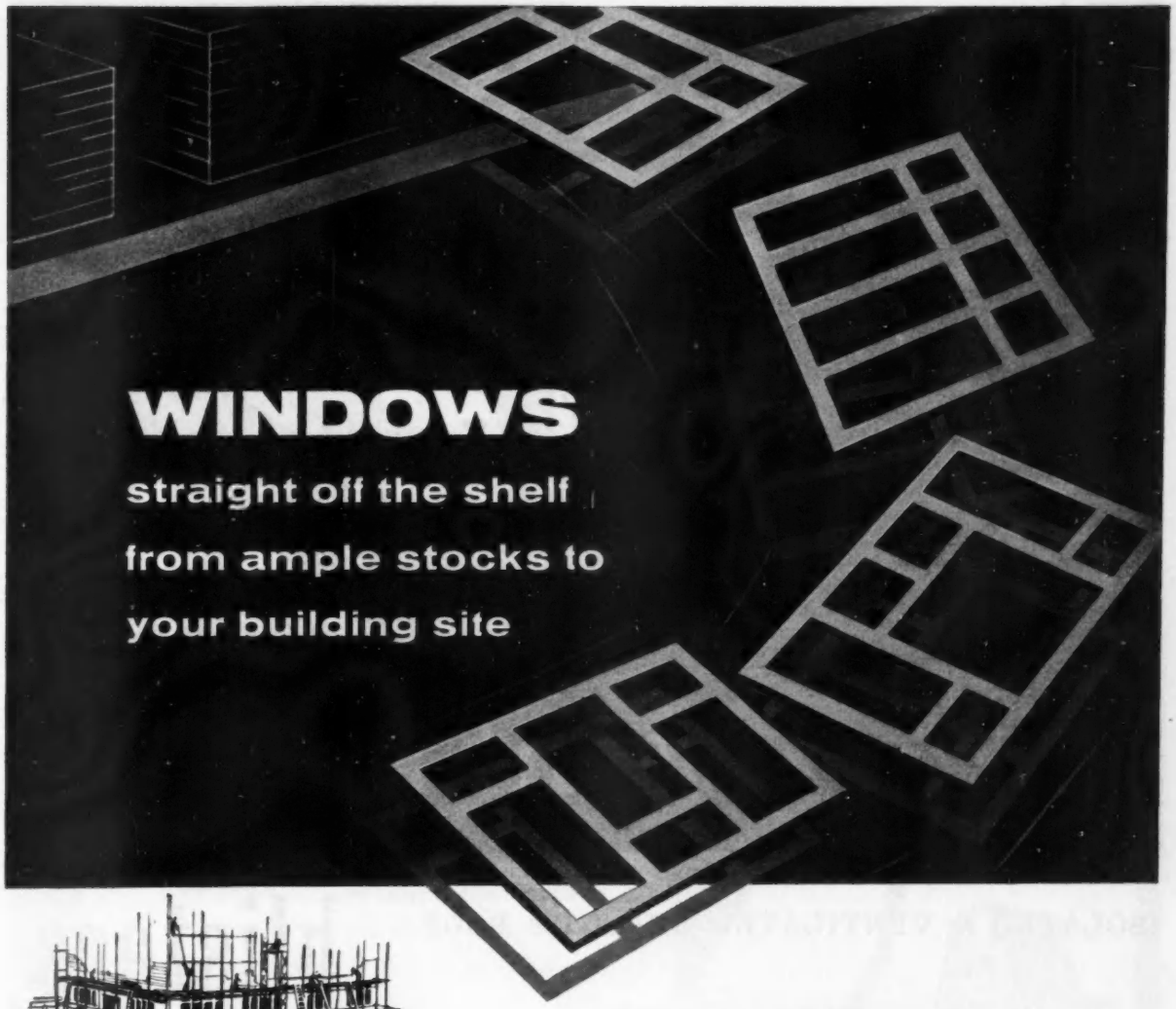

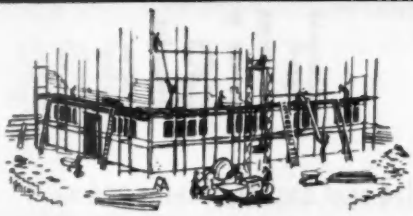

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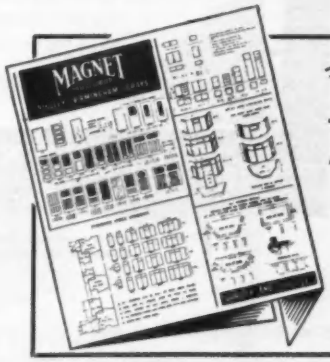

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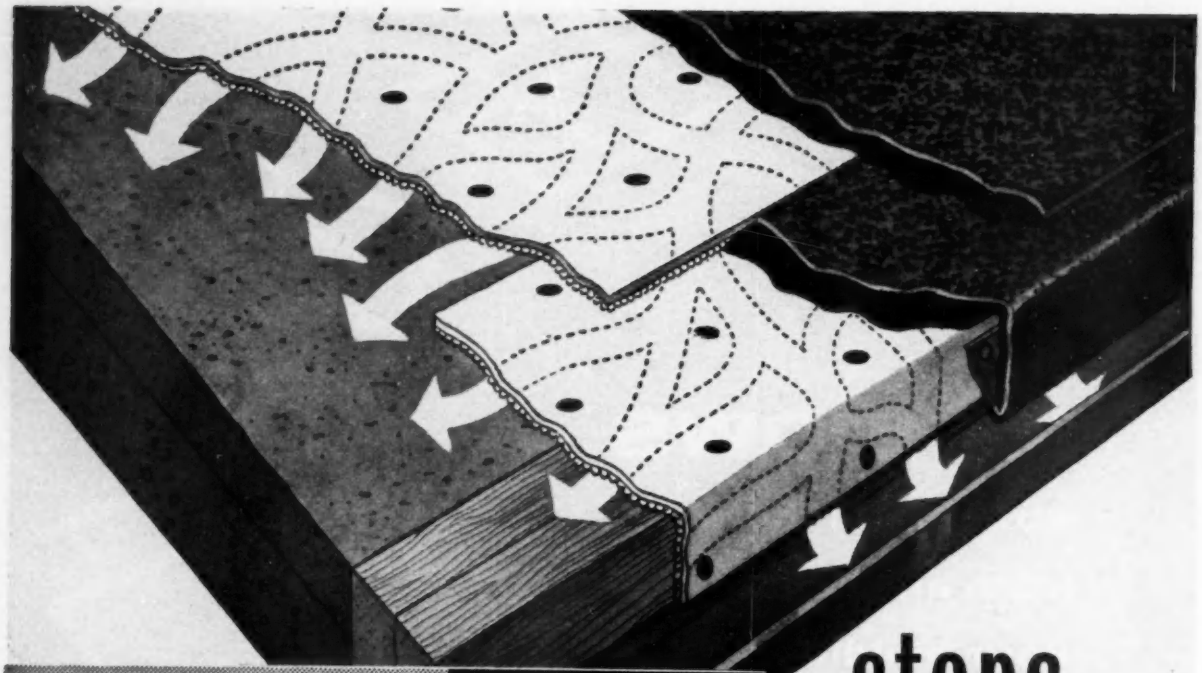

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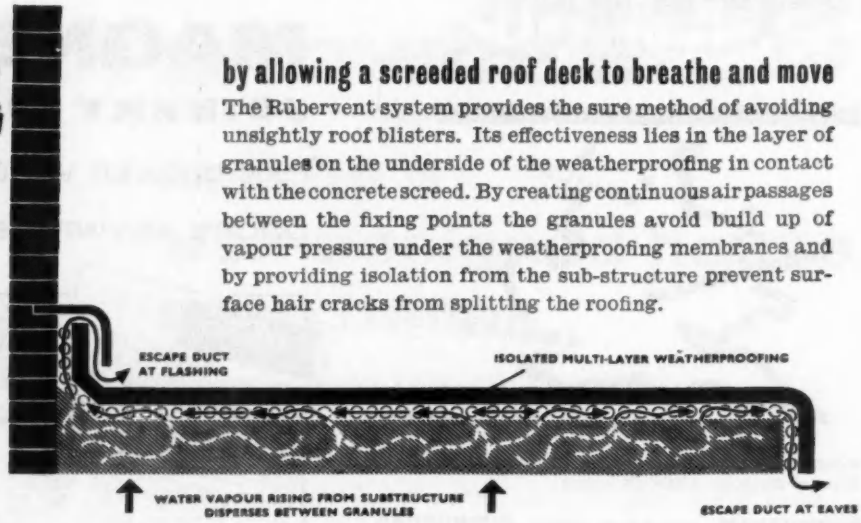

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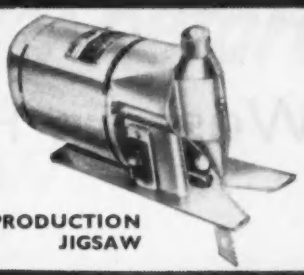
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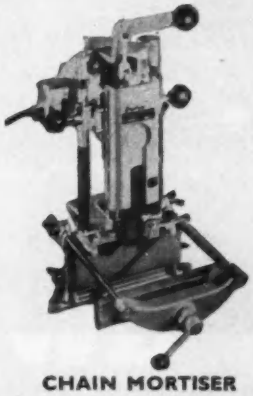
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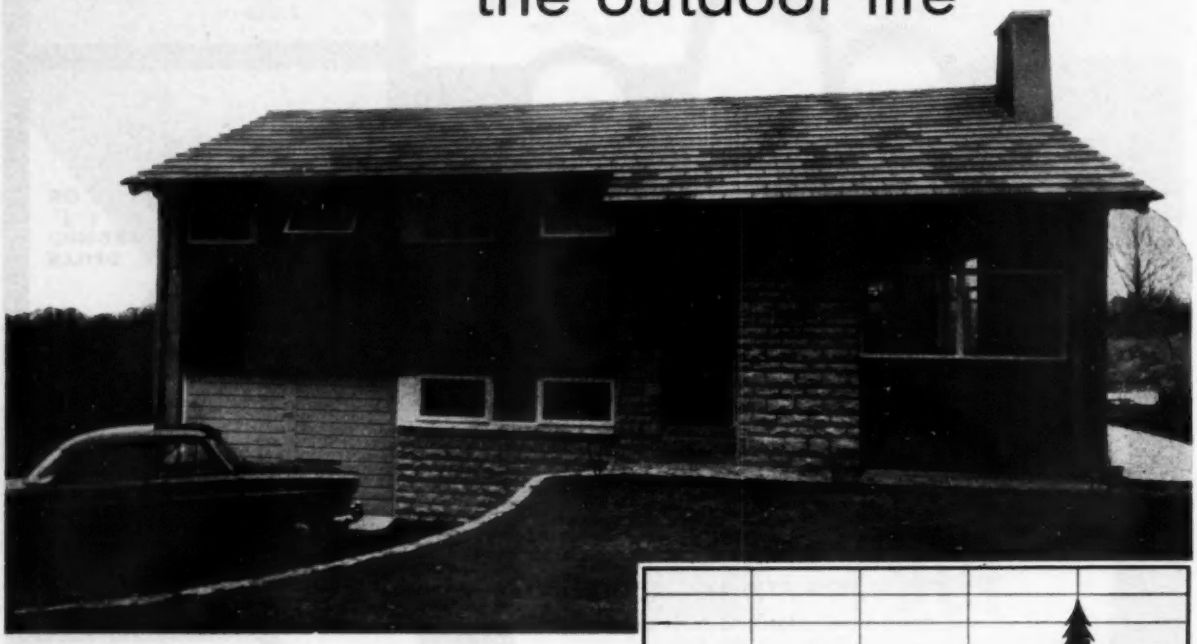
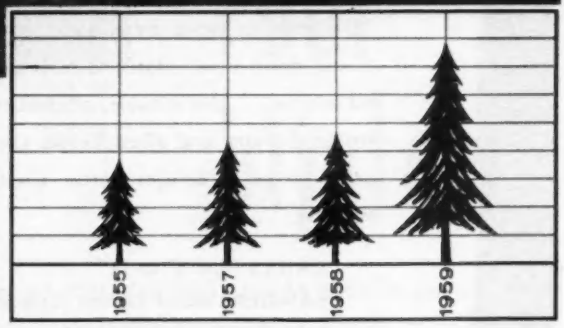
Western Red Cedar loves the outdoor life





—and Britain loves Cedar, as mounting imports show

Beautiful, versatile, Western Red Cedar is the builder's first choice for exterior cladding of houses, schools, hospitals and public buildings—whether the structure is timber frame or masonry. Also for outdoor structures such as sheds, garages, verandas, greenhouses and fencing, as well as window frames, doors and other joinery items.

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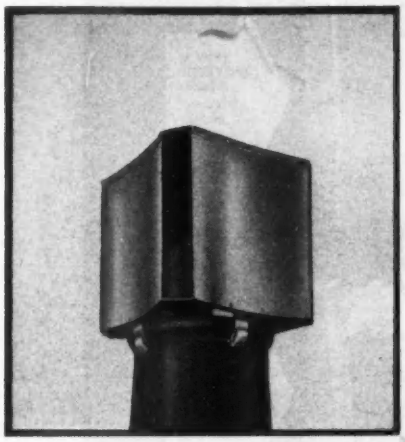

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Smoky Fires cured under written Money Back Guarantee

With the support of the Manufacturer's Money-Back Guarantee, 27 years' service and with over 1,000,000 Colt Cowls now fitted, the Colt Cowl is acknowledged throughout the Building Industry as the best answer to the smoky fire problem. It's reliability, efficiency, long life, first class distribution and 'after sales' service ensures a trouble free sale for the builder.

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COLT COWL

W. H. COLT (LONDON) LTD., SURBITON, SURREY Tel: ELMbridge 0161 (10 lines)

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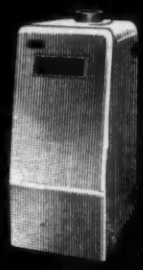

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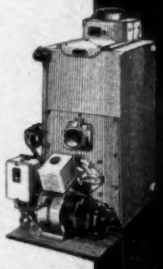

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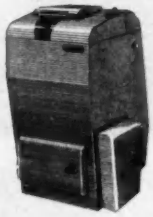

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Janitor Boilers make customer satisfaction certain, by reliable and efficient service. They are produced by the most modern manufacturing techniques, and their design is the result of years of experience in the evolution of the modern domestic boiler. They are built of the best materials, and the various components have undergone the most exacting tests.

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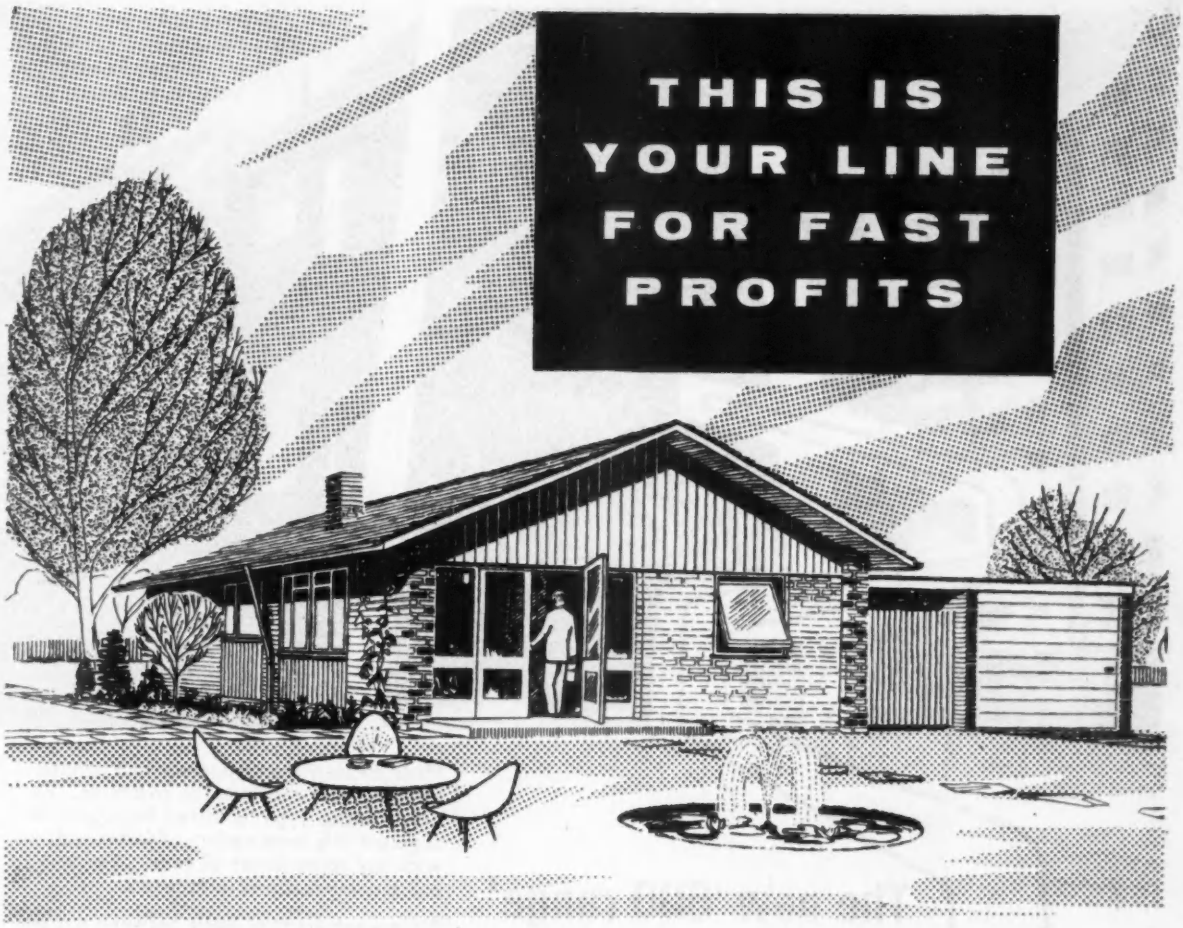

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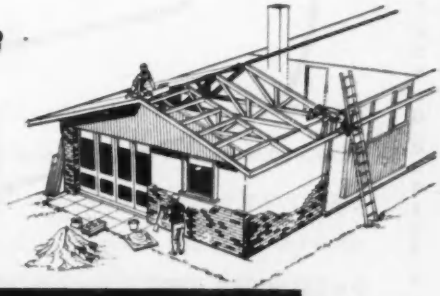
Write to-day to me personally for full details—
G. W. Glassborow, Deputy Managing Director.



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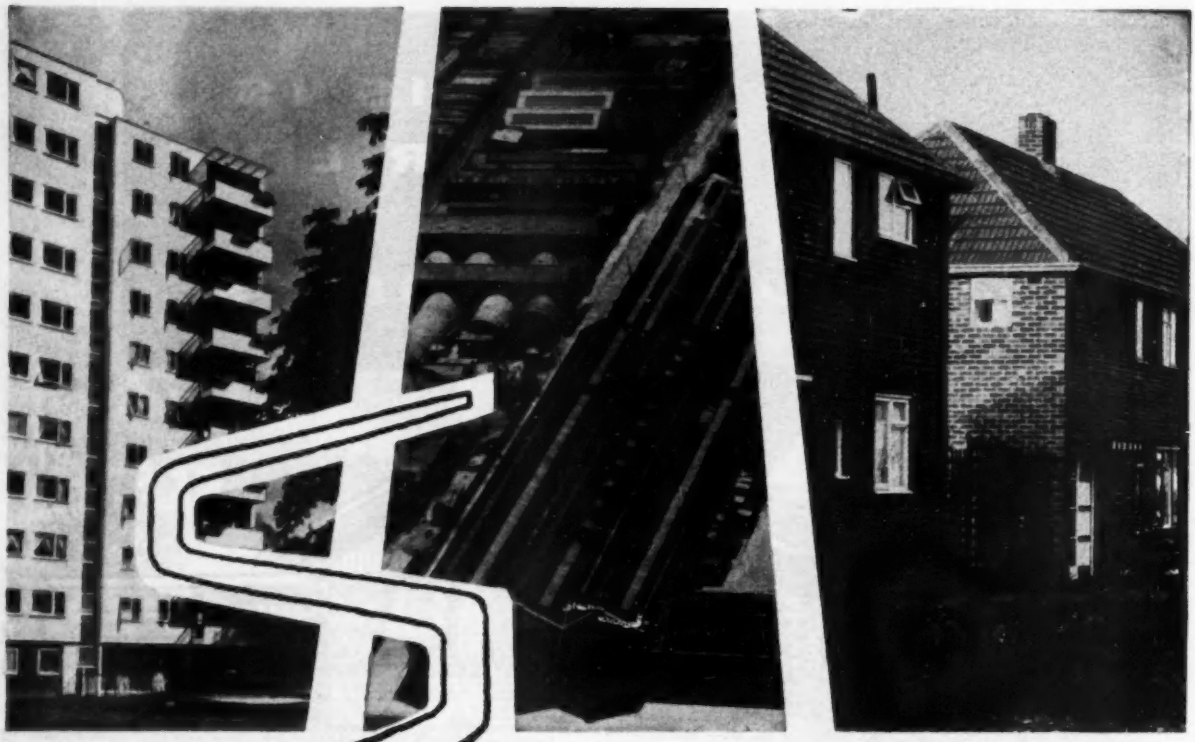

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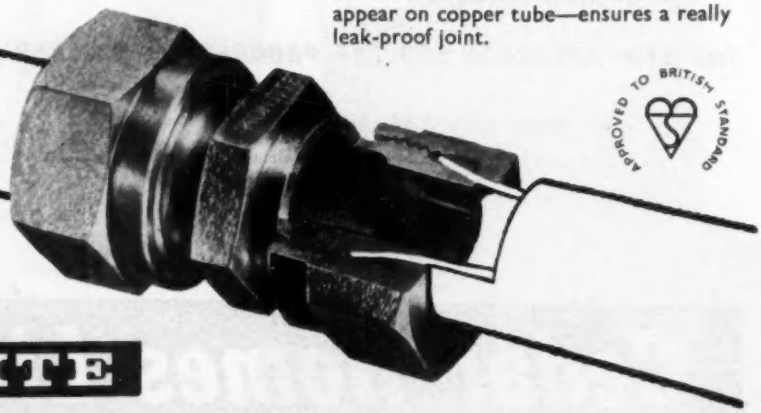

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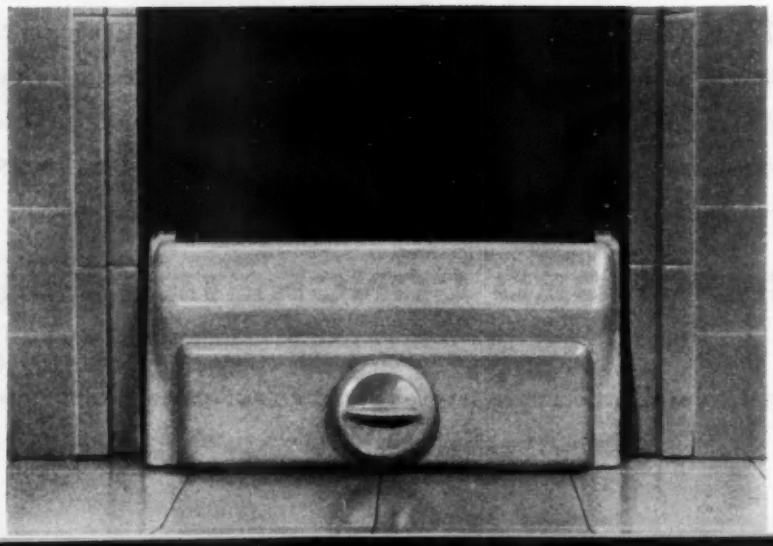
A Redfyre Bacboiler adds value to every house you build



Specify Redfyre, and you specify all the charm and comfort of a beautiful open fire . . . you specify the convenience of cheap hot water for kitchen and bathroom . . . and you specify the extra bonus of partial central heating. Yet for all this, Redfyre is inexpensive and easy to install; running costs are very very reasonable; and maintenance costs virtually non-existent.

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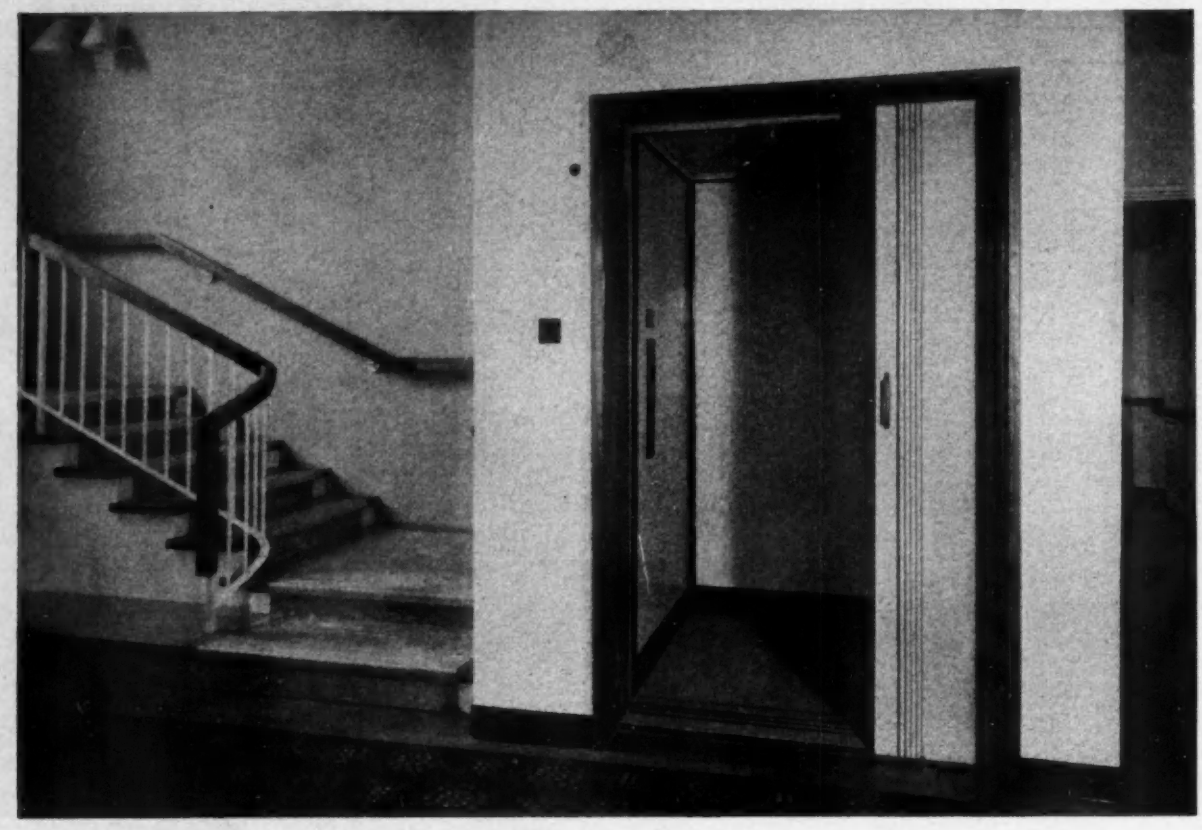
NEWTON CHAMBERS & CO LTD, REDFYRE PRODUCTS, THORNCLIFFE, SHEFFIELD

REDFYRE



H & C

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LIFTS

Further information and illustrated literature on request.

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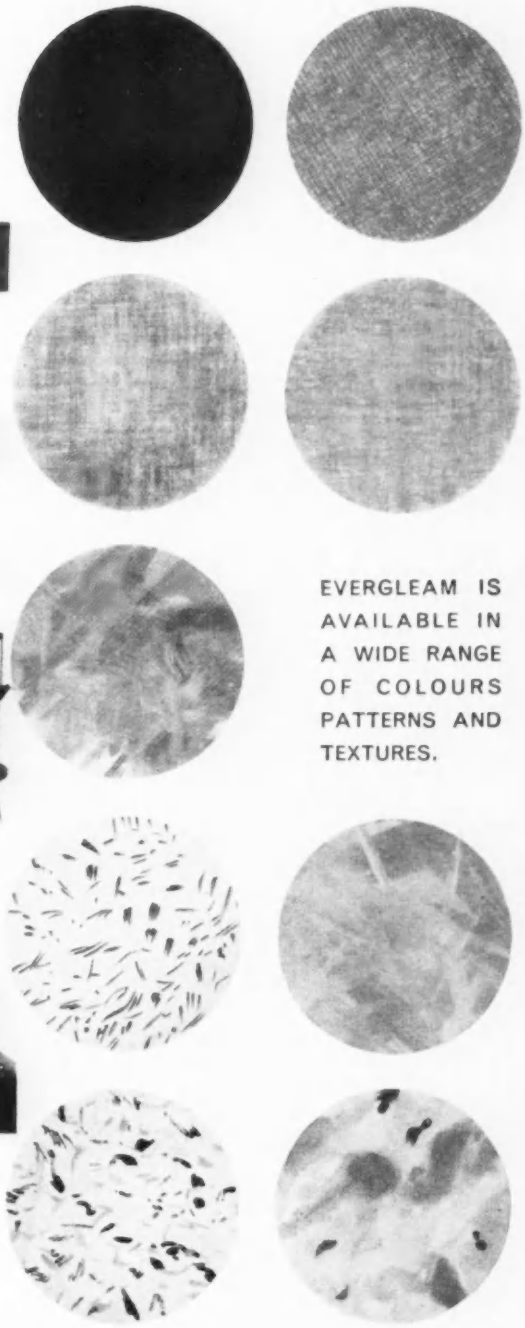

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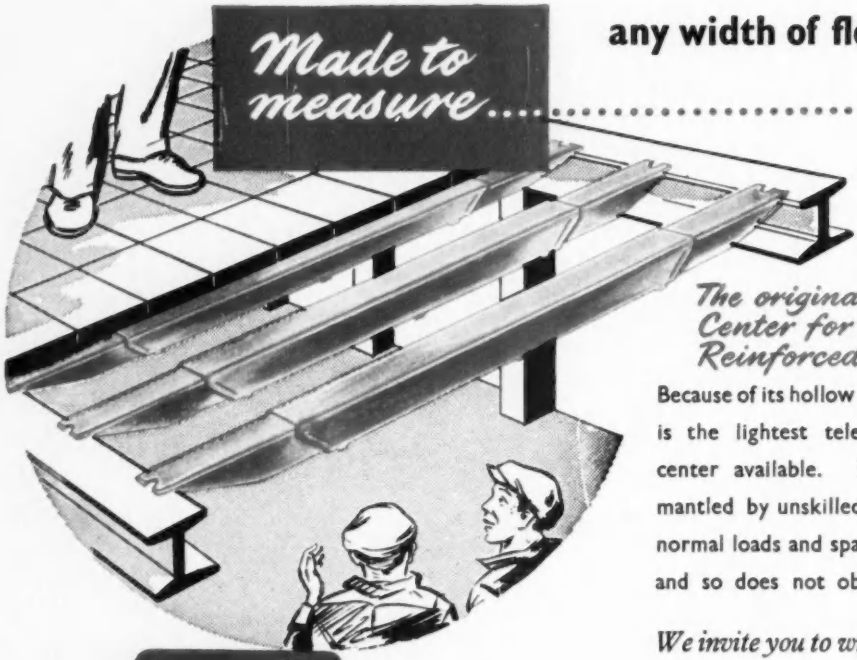

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Because of its hollow triangular design, **TRIANCO** is the lightest telescopic floor shuttering center available. Easily erected and dismantled by unskilled labour, and subject to normal loads and spans, it needs no propping and so does not obstruct following trades.

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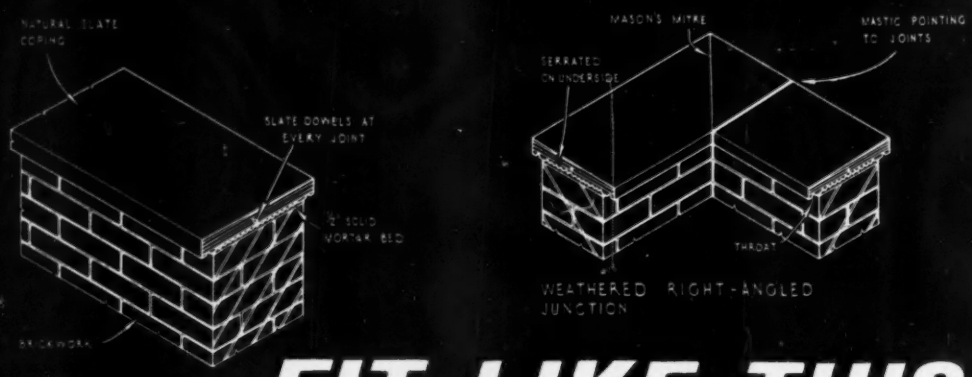
COPINGS



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Slatekraft Blue-purple copings are supplied Flat, Weathered or Saddleback as required, to random lengths 2ft. 0in.—4ft. 6in. Usual widths are 12in., 14in. & 16½in., and usual thicknesses 1in., 1¼in., 1½in., 2in., 2½in. & 3in. Note that mastic should be used on all joints. For technical leaflet and prices write to FLETCHER & DIXONS LTD, Poplar Town Hall, London, E3. Tel. ADVance 6001. Works: Caernarvon, N. Wales.

The ceiling that lights

Architects: Architect's Department, Ministry of Works.

Lumenated Module ceiling for a new-look Post Office

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Lumenated Ceilings are precision made. They arrive on site ready for immediate erection—using a minimum of skilled labour. They are covered by a comprehensive guarantee and a full maintenance service is provided. Expert co-operation on design and installation can be given by our experienced staff. Most Lumenated Ceilings diffuser designs have been accepted by the Council of Industrial Design. Please write for full details.

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Loadmaster hoists need no skilled labour. No site preparation required.

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Spigot guides ensure smooth running.

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Basic components are small and compact...easily handled by normal traffic—lorry, dumper, etc.

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Platform speeds up to 250 ft. per minute. Long-life bearings fitted throughout.
Mark 1: 20 cwt. capacity. 12 cu. ft. automatic tipping-skip.
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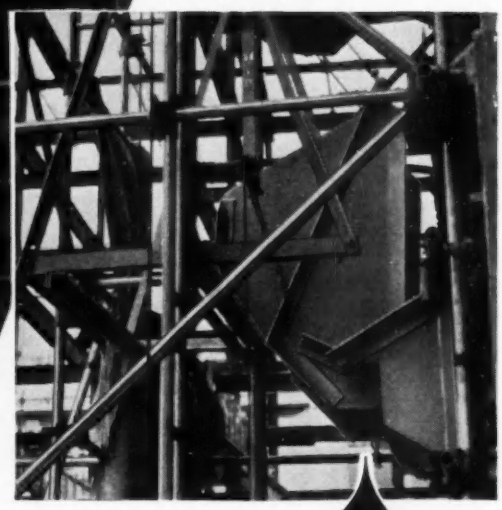
Automatic tipping at working height up to 500 ft. ensures speedy placing of concrete.



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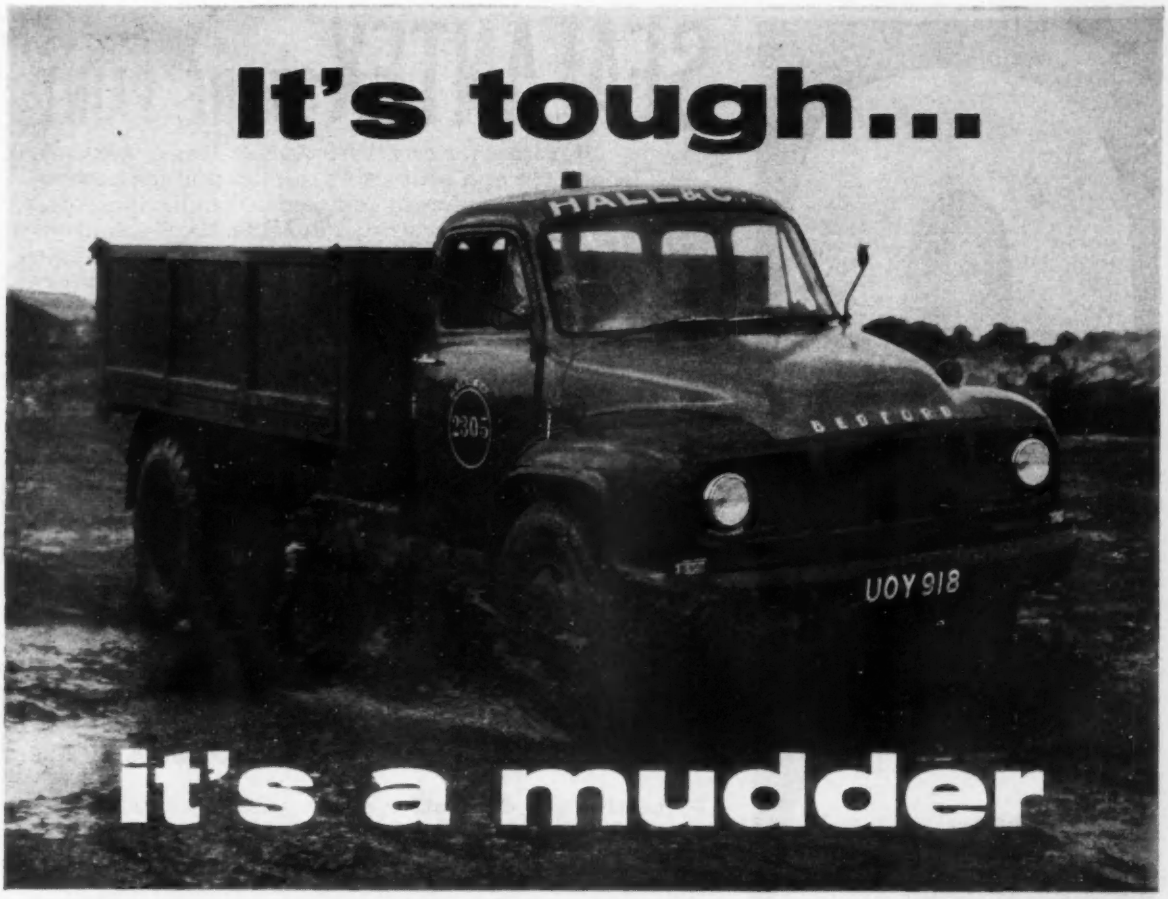


There's nothing to touch a Bedford tipper's performance in muddy conditions. Cleverly thought-out weight distribution makes sure of maximum traction all the time!

There's nothing like a Bedford for standing up to the heavy impact loading of excavators. Note the depth of those Bedford FRAMES and those cold-squeeze riveted cross-members! Note the Bedford springs — 45 to 50 inches long at the front with telescopic shock absorbers, heavy duty progressive at the rear.

You won't find these tippers shaking to pieces! Even the WHEELS are now welded for maximum ruggedness. POWER UNITS Bedford long-life diesel or petrol; GEARBOXES four or five speed in heavy duty cast-iron casing; AXLES single speed or Bedford's own two-speed job; all are engineered for long dependable service.

And always within easy reach, wherever you're operating, there's experienced Bedford SERVICE available with ready stocks of genuine low cost Bedford parts. But see your Bedford dealer — he can tell you every particular thing you want to know.

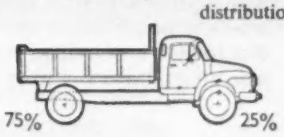
Normal control 6 cubic yard

7 ton rating. 300 cu. in. Bedford-built six-cylinder diesel or petrol engine. Bedford two-speed rear axle optional, giving low ratio for super traction, high ratio for speed and economy when travelling light. Diesel chassis from £1,055, chassis-cab £1,130, tipper £1,380.

Normal control 5 cubic yard

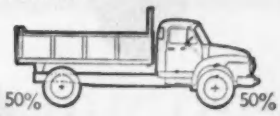
6 ton rating. Powered by 214 cu. in. six-cylinder petrol engine or 300 cu. in. diesel. Single ratio rear axle fitted as standard, but Bedford 2-speed axle available as a regular production option. Petrol chassis £820, chassis-cab £895, tipper £1,065.

Mud doesn't worry the driver of a Bedford! See how well-designed weight distribution takes care of this.



Laden

When this Bedford 6 cu. yd. normal control tipper is fully laden, 75% of the weight is on the rear wheels, giving splendid traction and lots of grip for slippery gradients. No bogging down here!



Unladen

Even when unladen, half the weight is still on the driving wheels to give grip and prevent spinning in soft ground . . . Smartly into position, smartly away: that's Bedford!

Made by
Vauxhall Motors Ltd, Luton, Beds.

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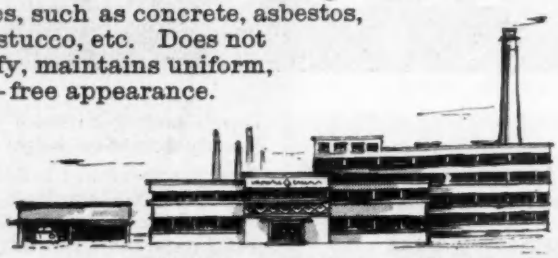

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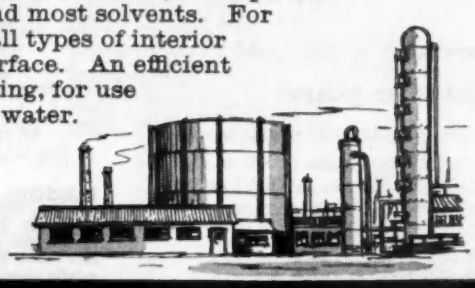

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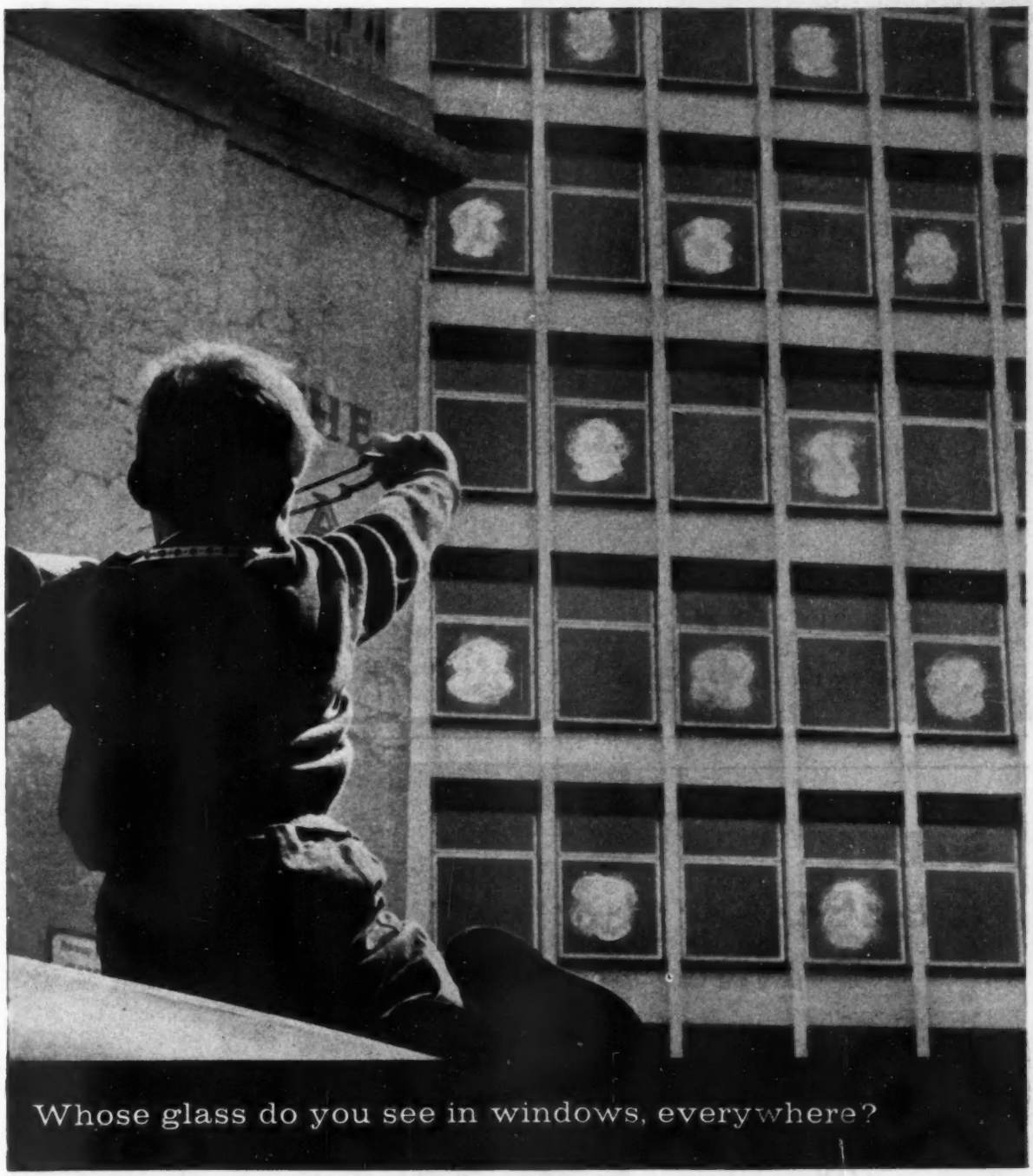

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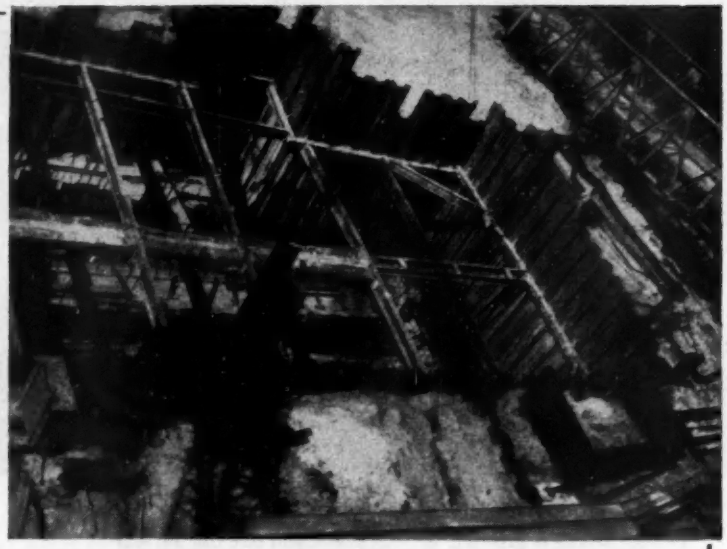

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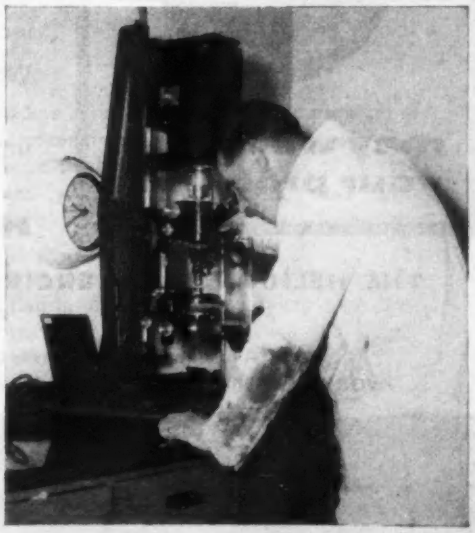

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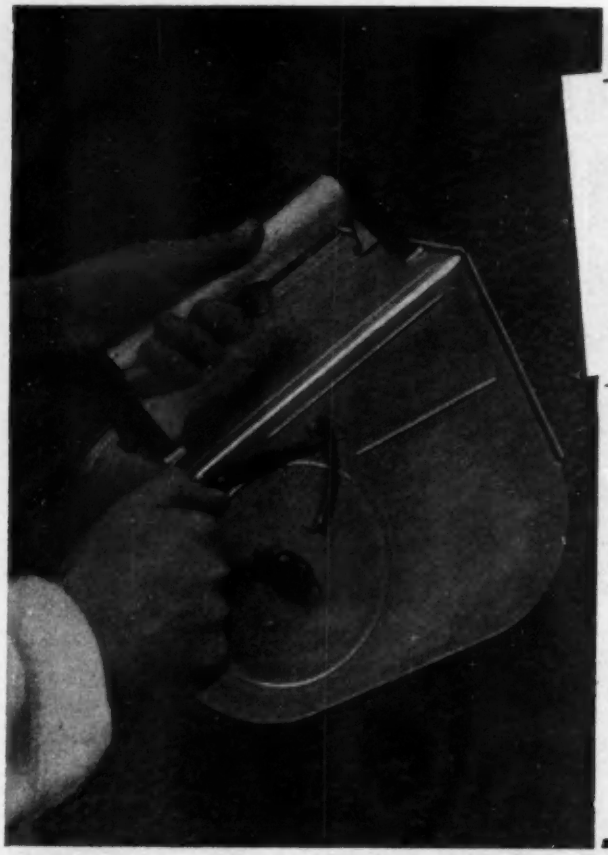

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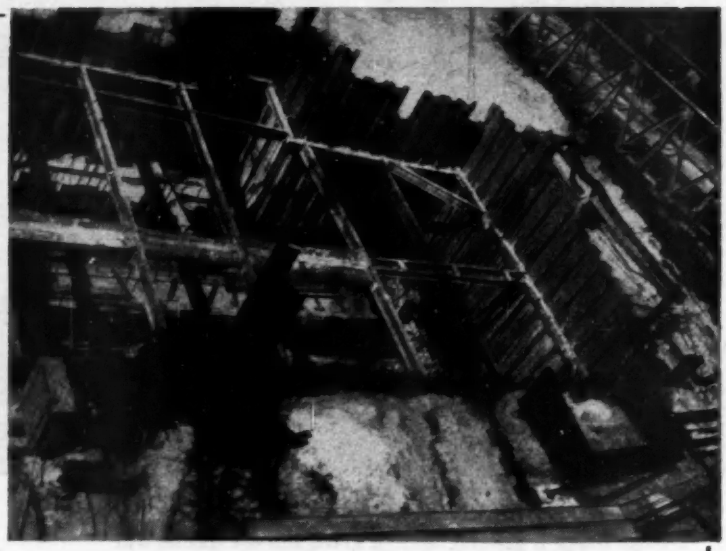

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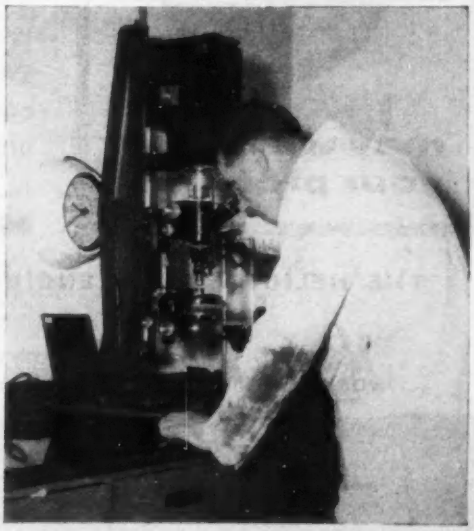

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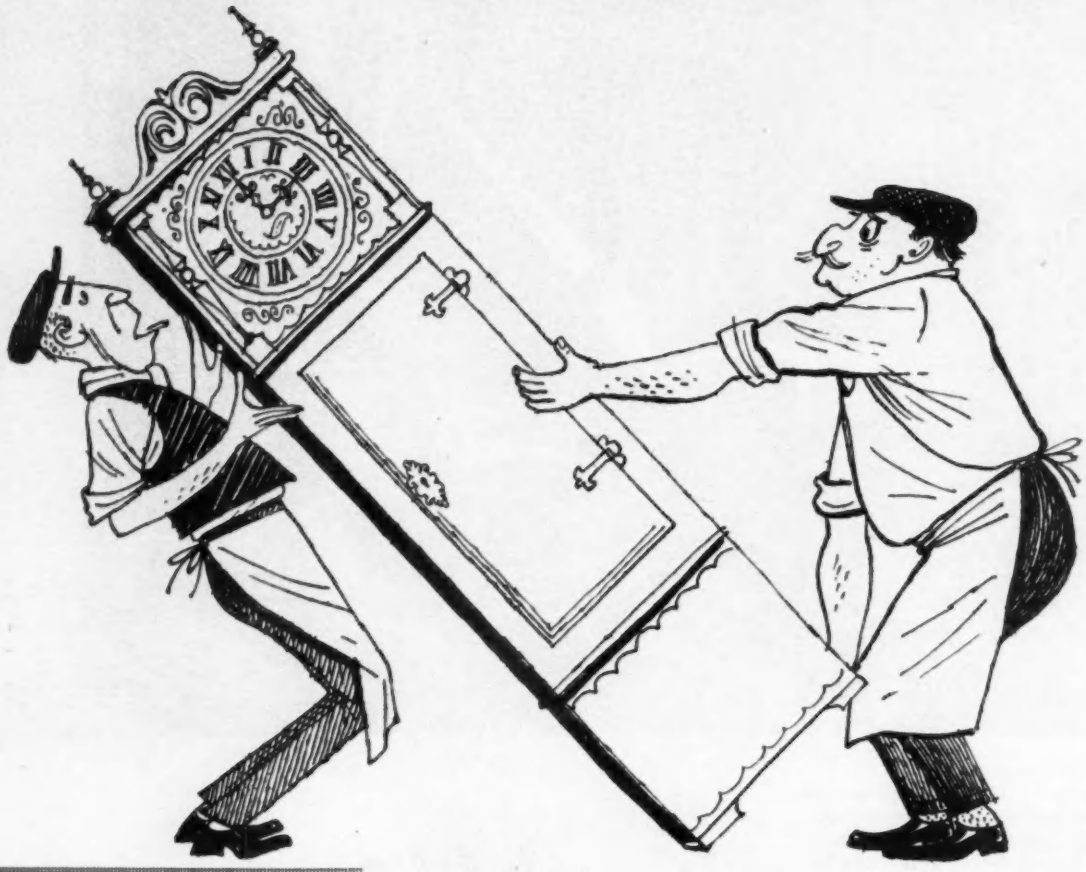

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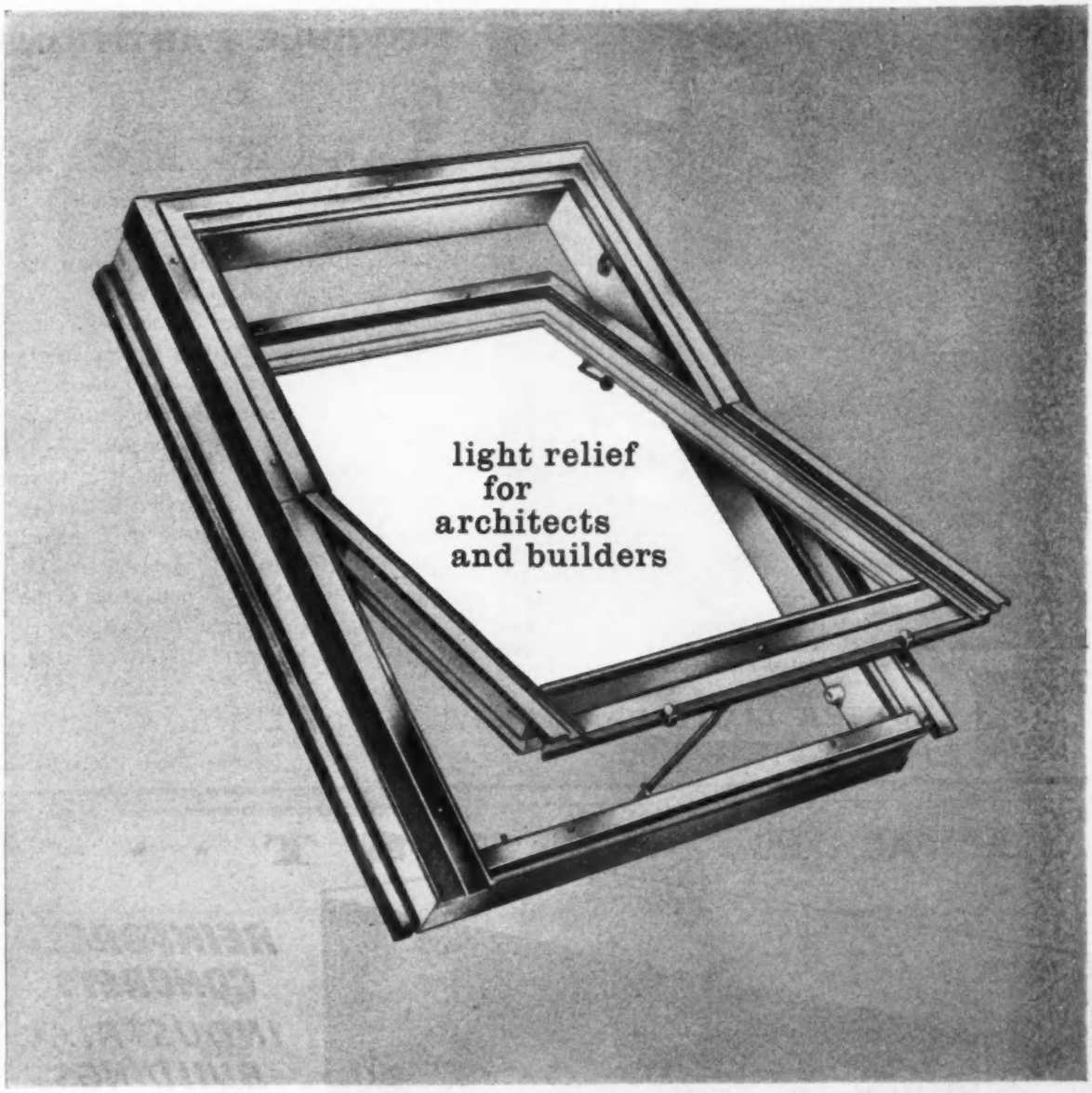

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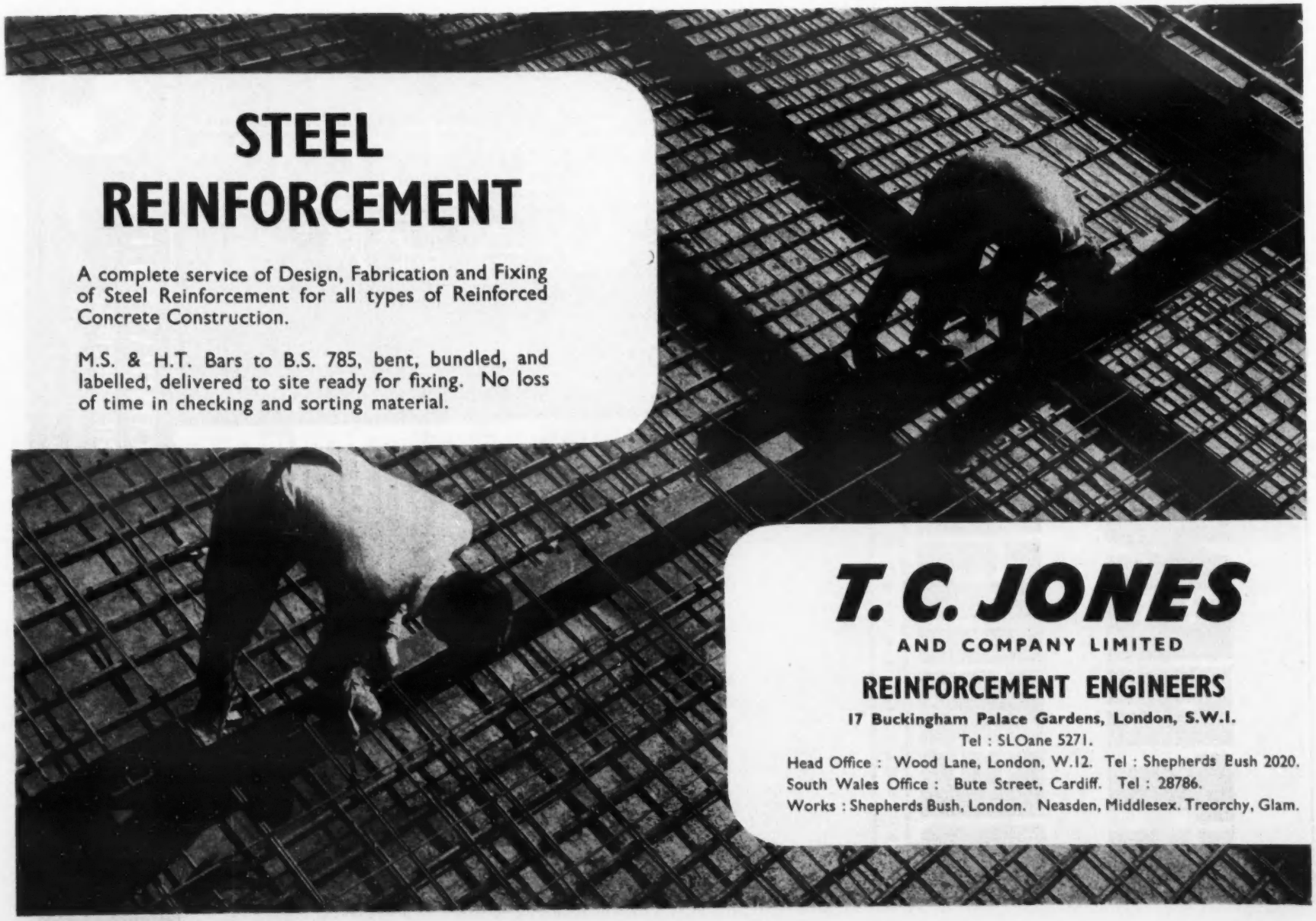

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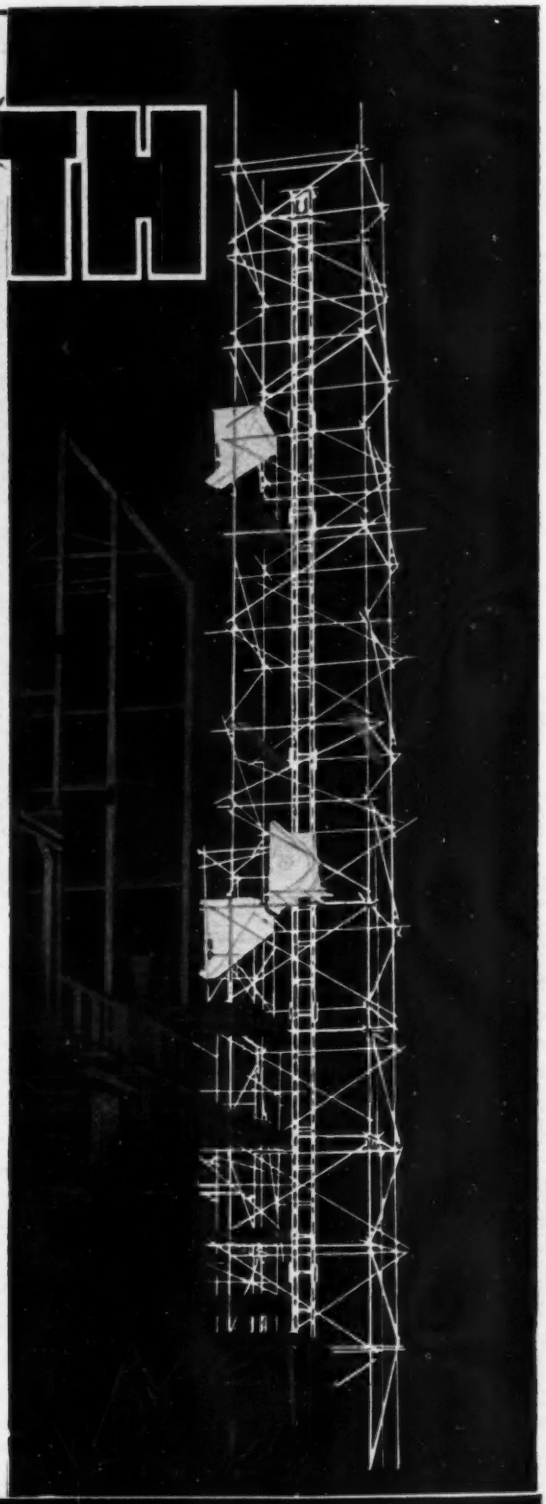

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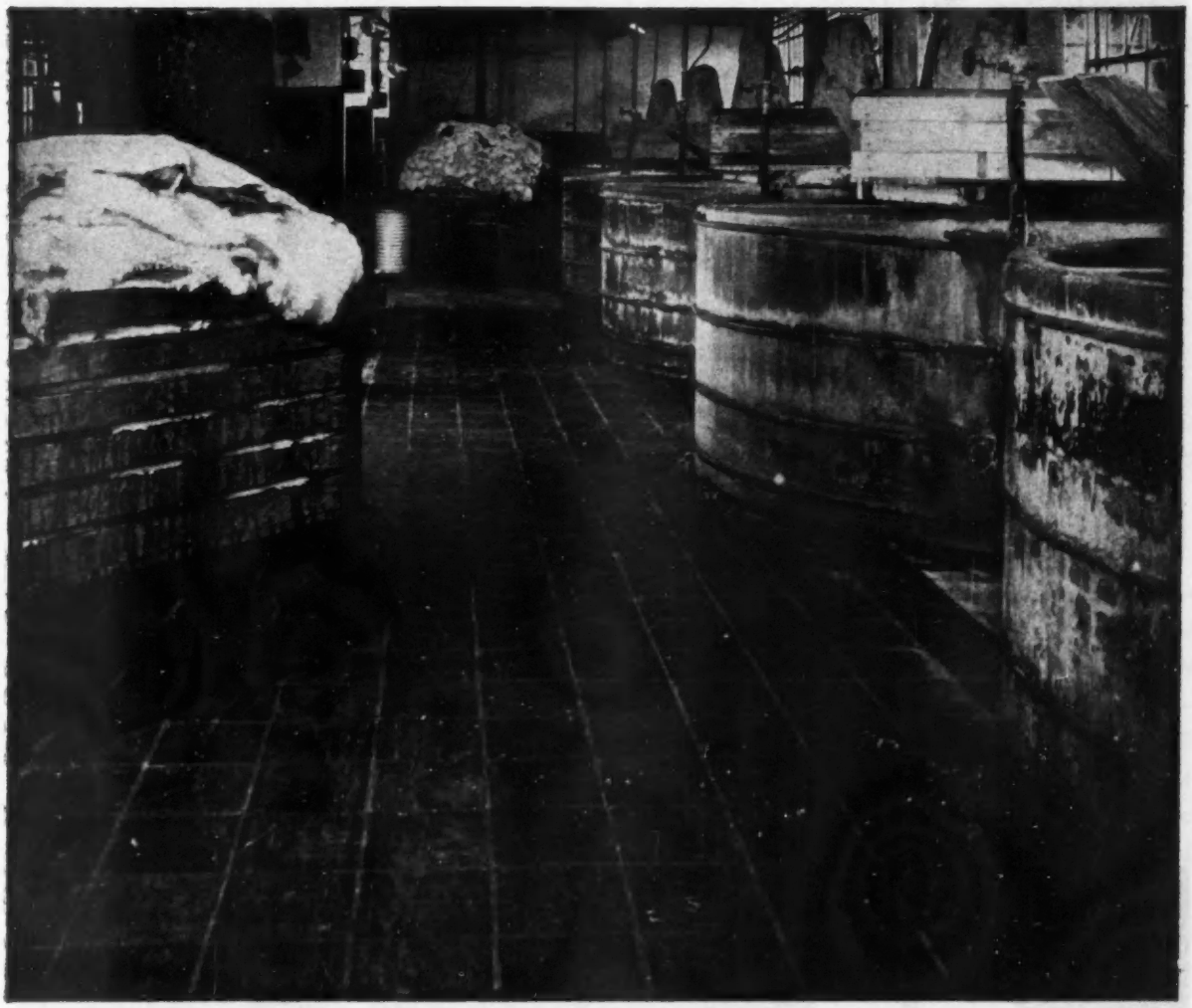

FUR DRESSING AND DYEING

—another exacting test of a floor

This floor fixed by Prodorite Ltd. has to withstand constant washing down, spillage of the various chemicals used in fur dressing and dyeing and fairly heavy trucking from 5 cwt. to 10 cwt. steel wheeled trucks.

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9" x 9" x 1½" Blue Lockjoint Quarries have been used

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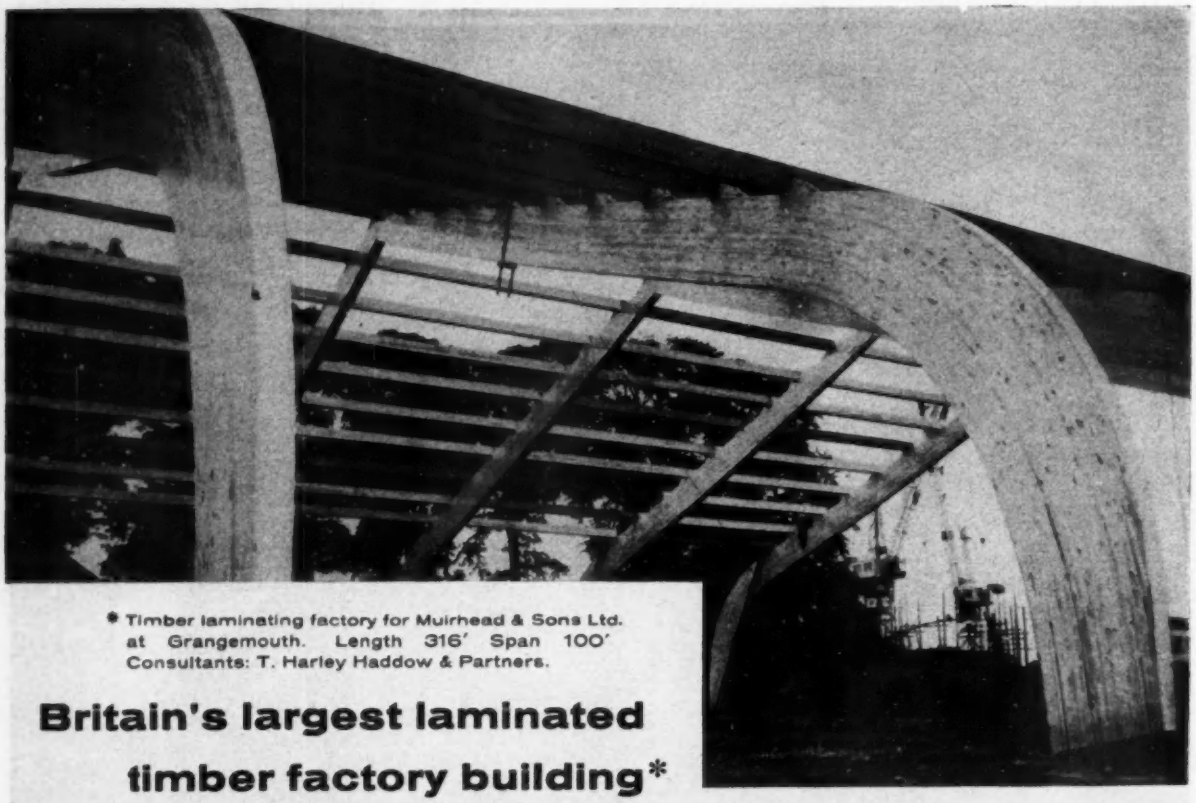

* Timber laminating factory for Muirhead & Sons Ltd. at Grangemouth. Length 316′ Span 100′ Consultants: T. Harley Haddow & Partners.

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AP551

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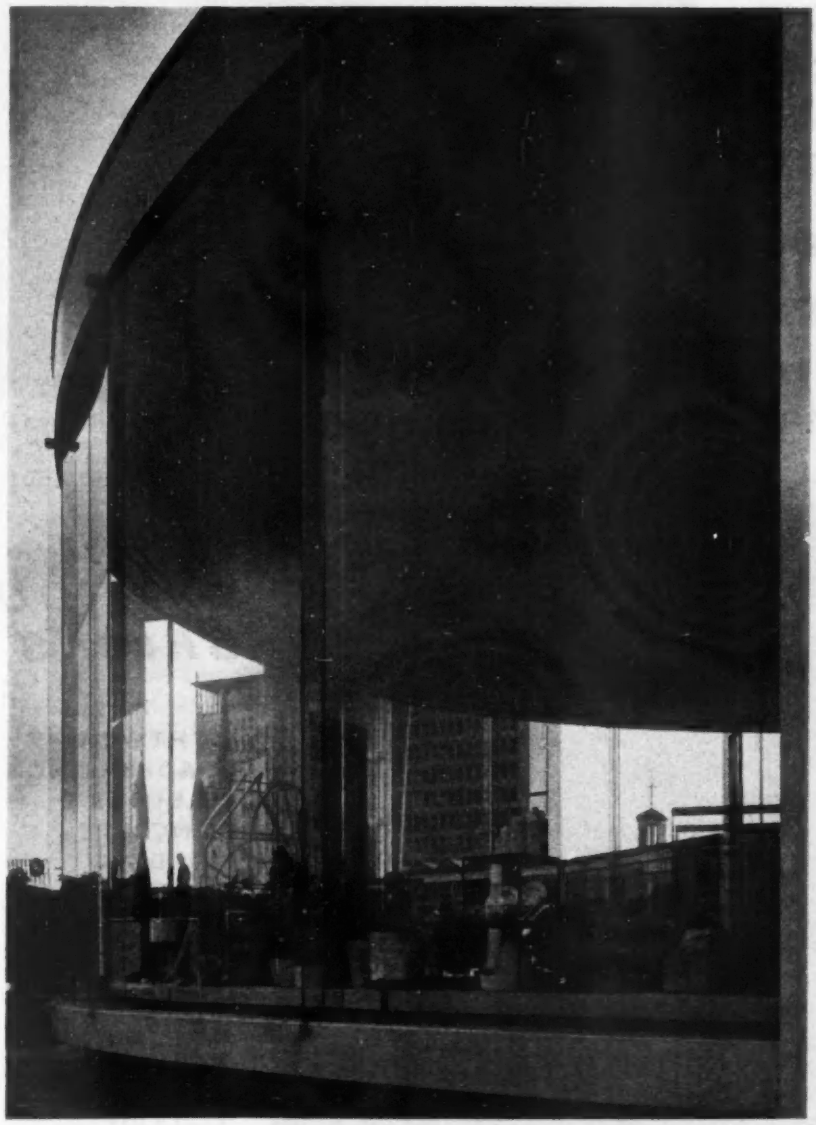
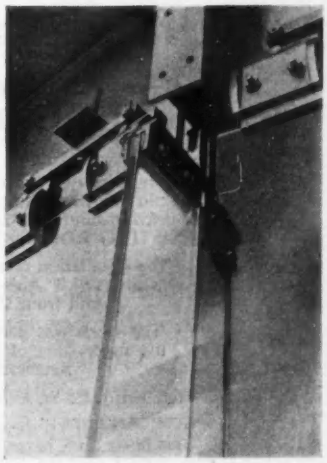
SUSPENDED GLAZING

Clark-Eaton introduce

AN IMPORTANT DEVELOPMENT

for the installation of Tall and Large Plates





Patentees- Glasbau Heinrich Hahn
Patent No. 816,000

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BOTTOM EDGE CLEARANCE

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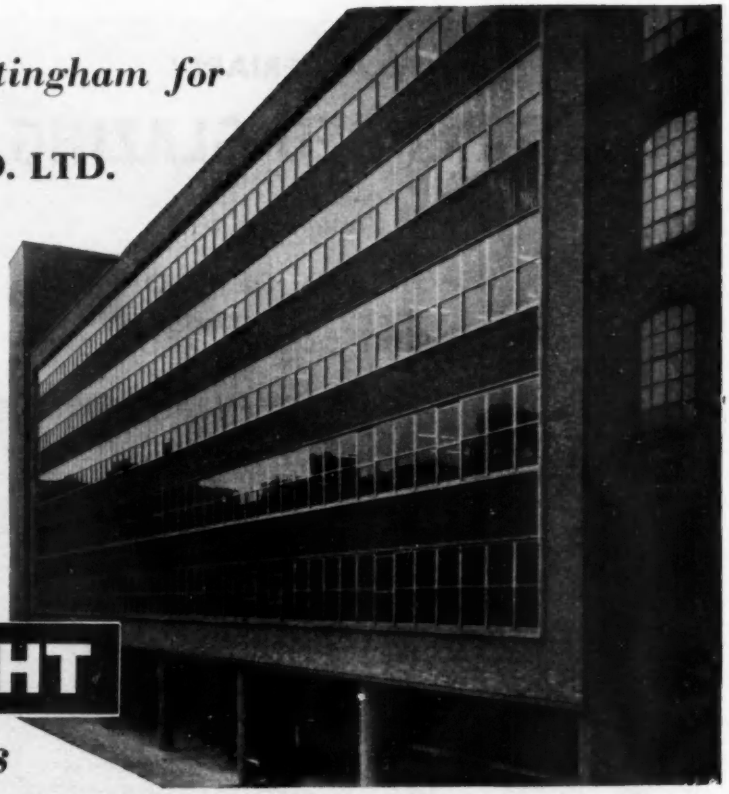

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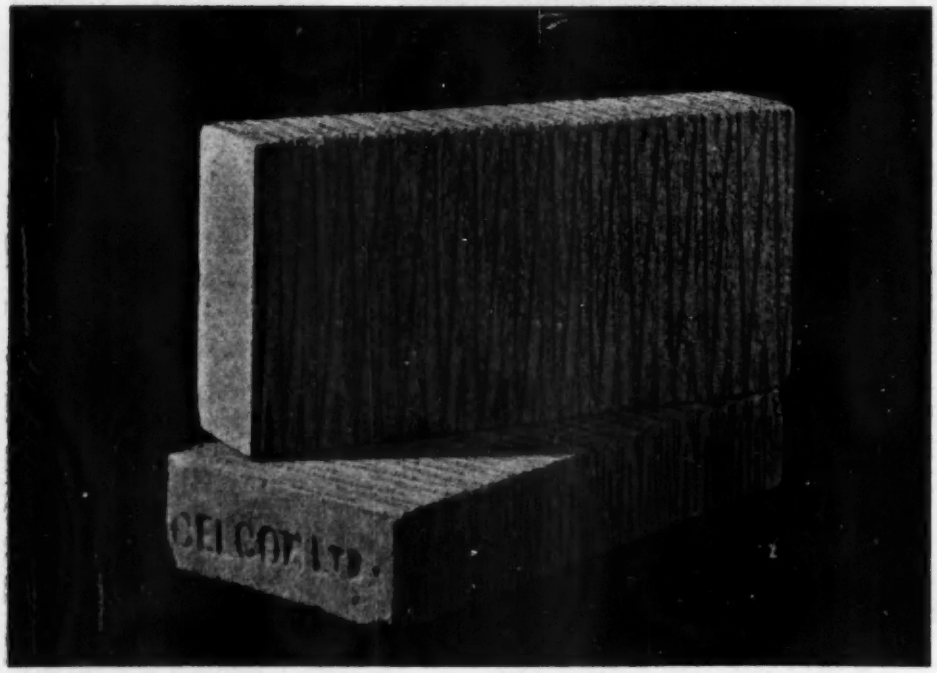

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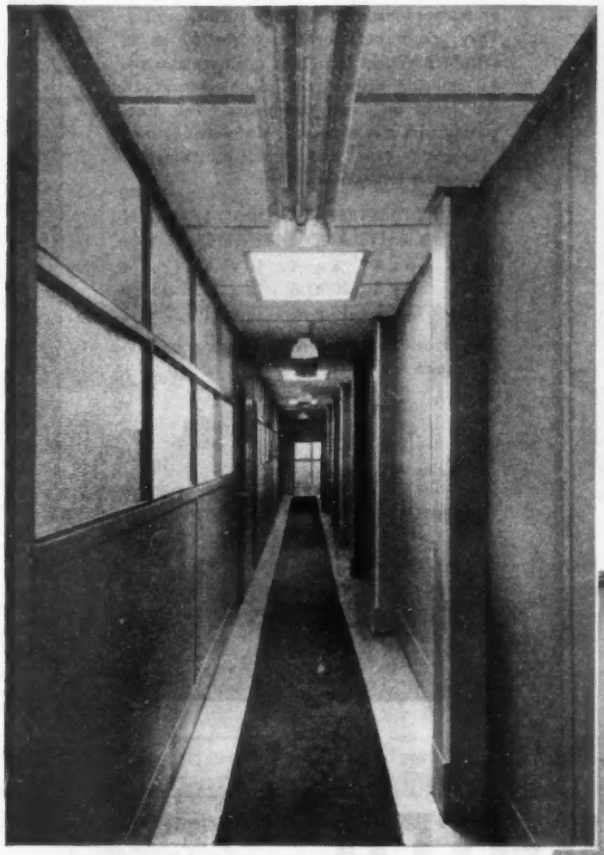

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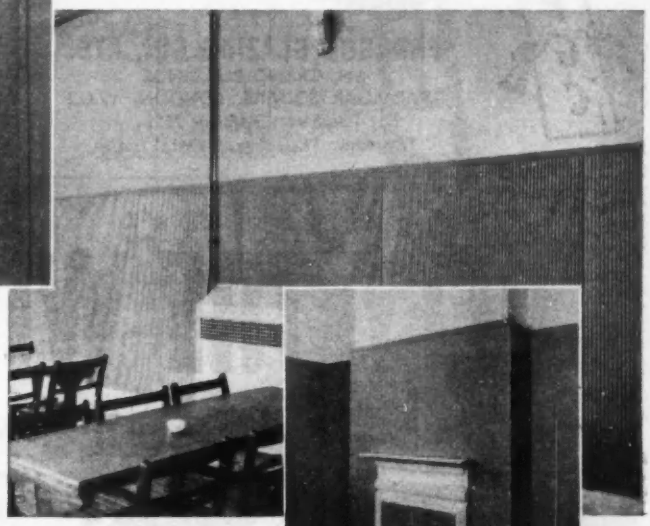
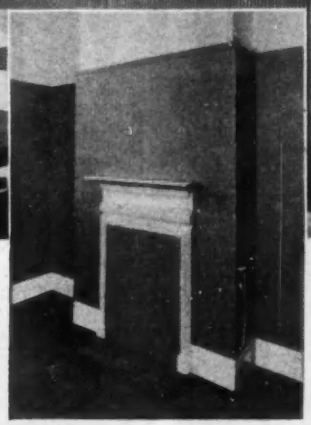
View along main corridor of offices. Wall panels, partitions and floor covering are of Sundeala 'SOVEREIGN' Hardboard, and for the ceiling Sundeala Medium Hardboard was used.



Part of the Works Canteen. Note the pleasing effect achieved with lower panelling in Sundeala 'Sovereign' Reeded Board and upper panelling and ceiling in Sundeala 'Sovereign' plain Hardboard.



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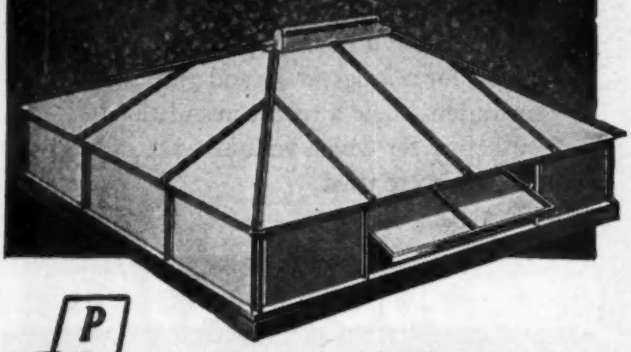

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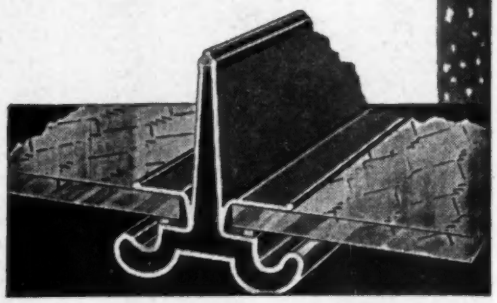

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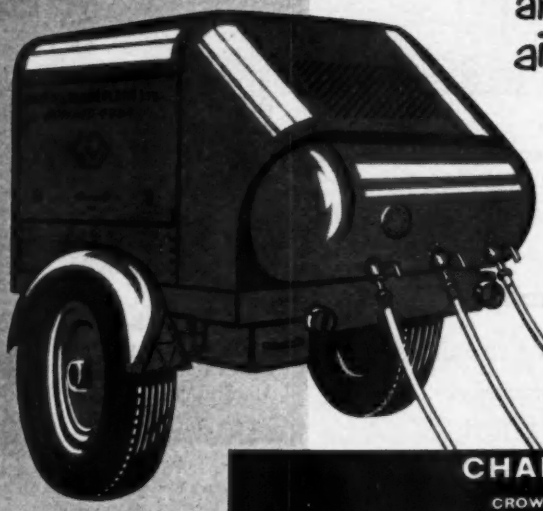

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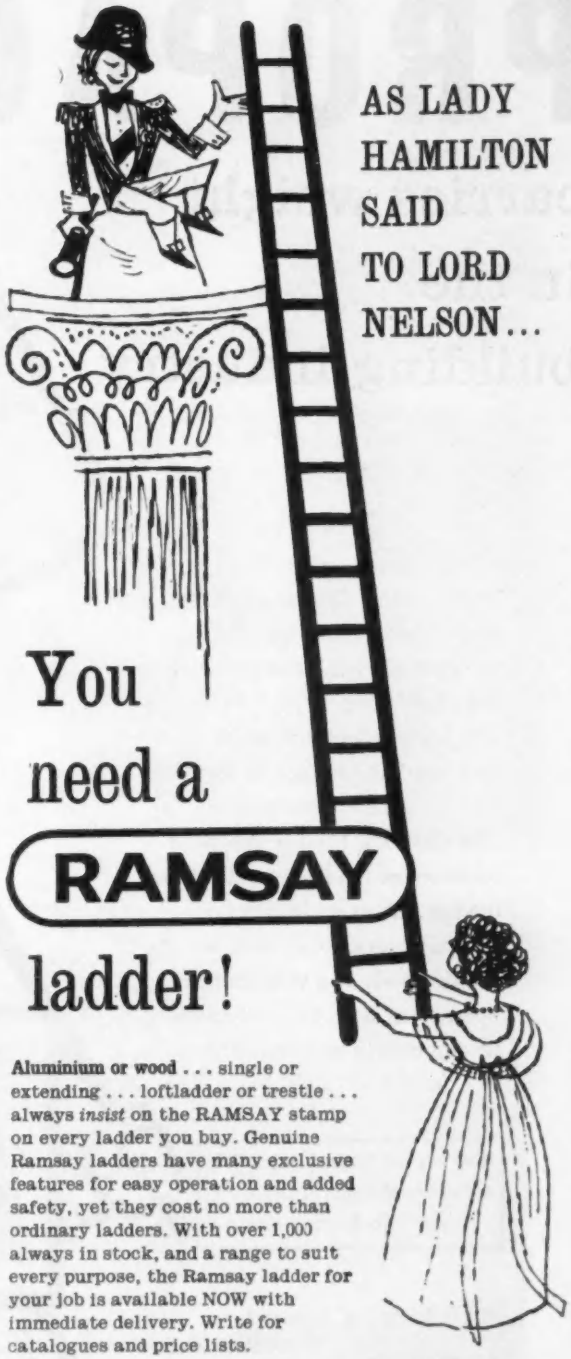

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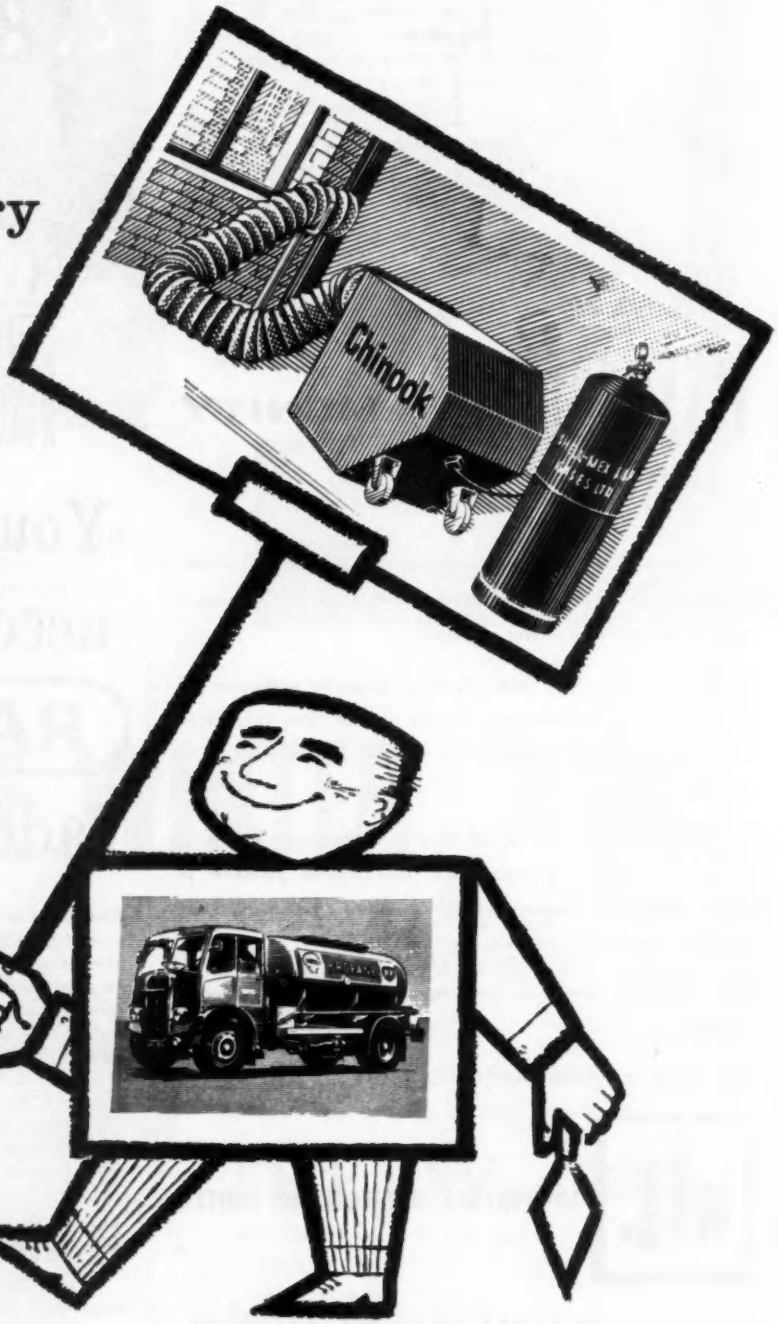

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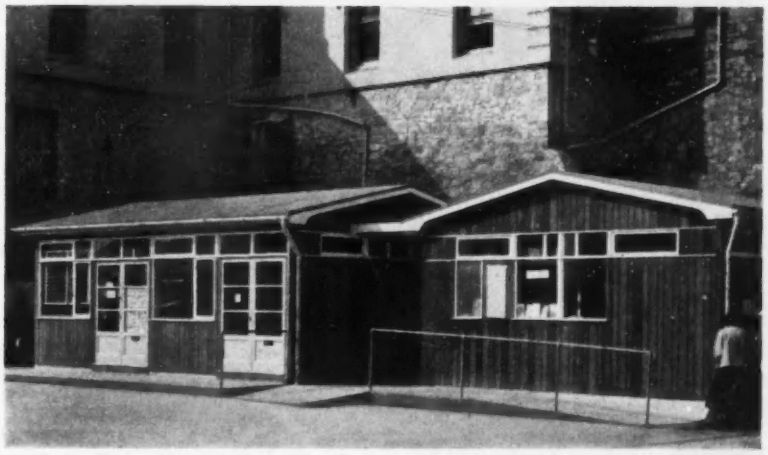
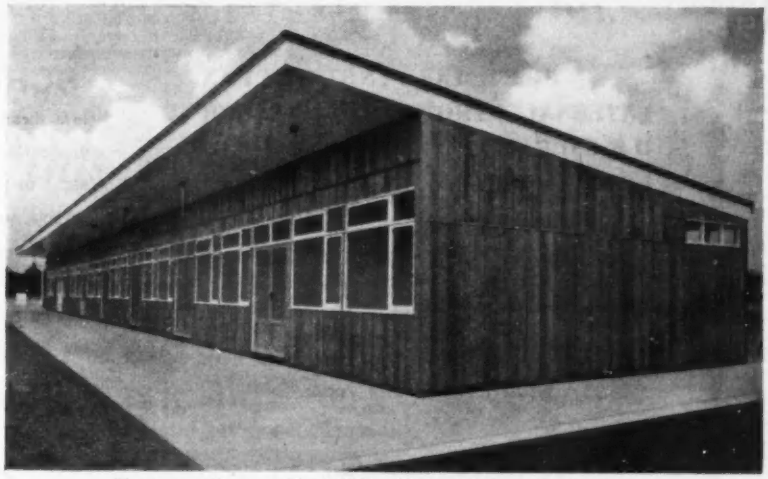


Temporary Shops. *Photograph by courtesy of the City Architect, City of Exeter.*



Temporary Services Block 150′ x 30′ for Salisbury Cattle Market.
Photograph by courtesy of the City Engineer, City of New Sarum.

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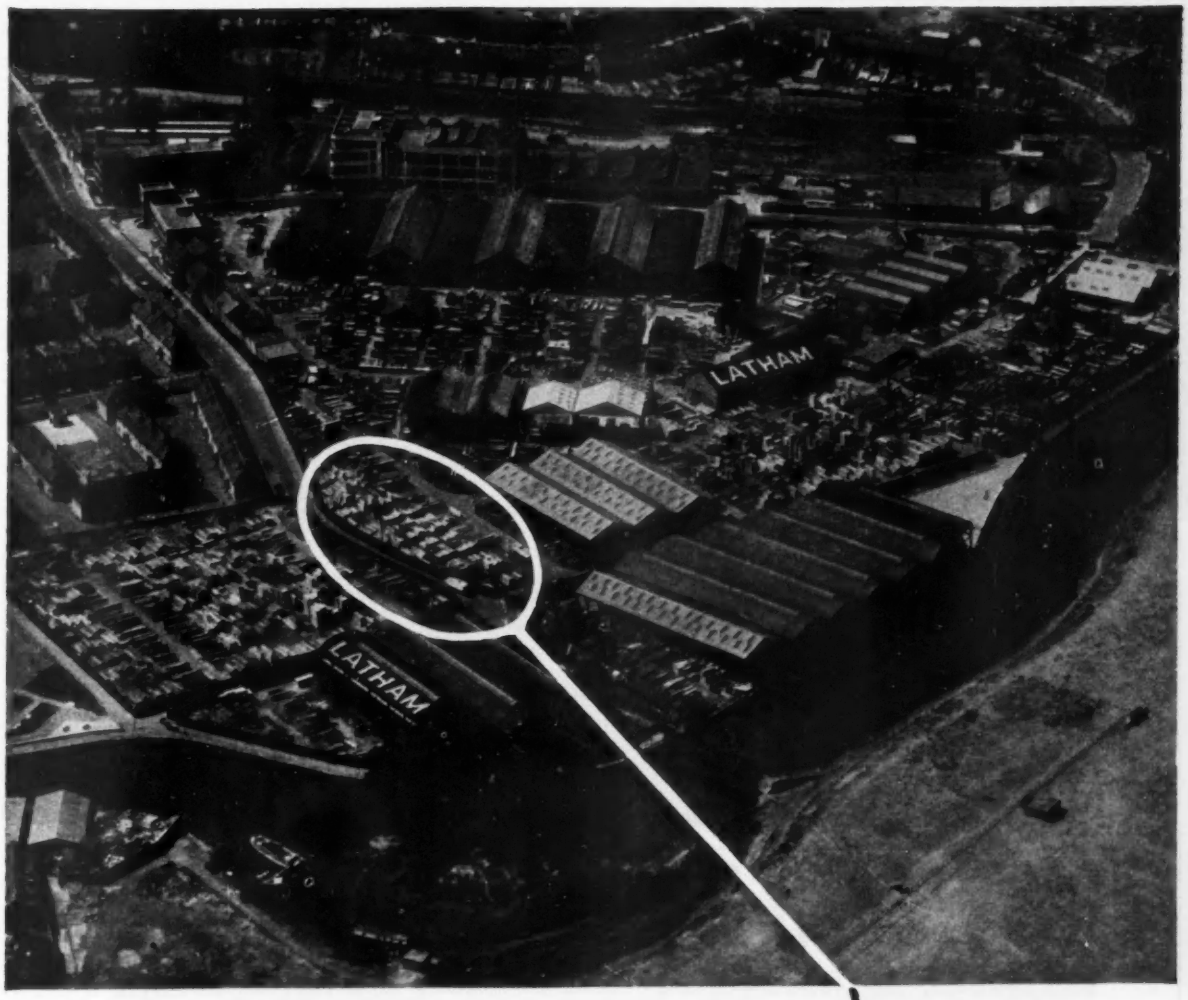

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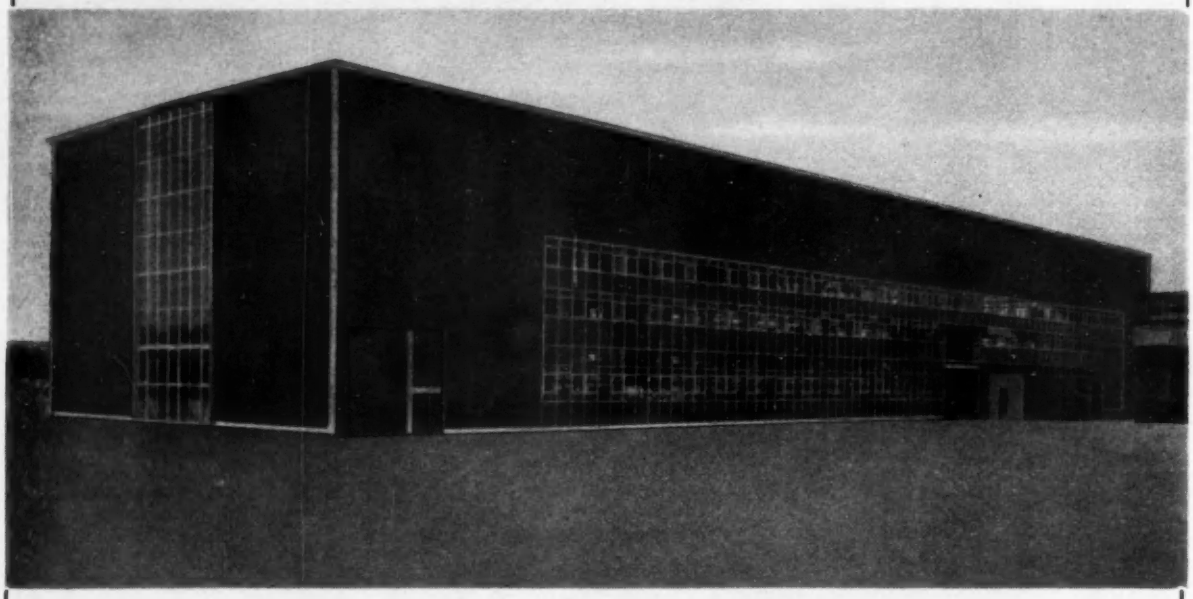

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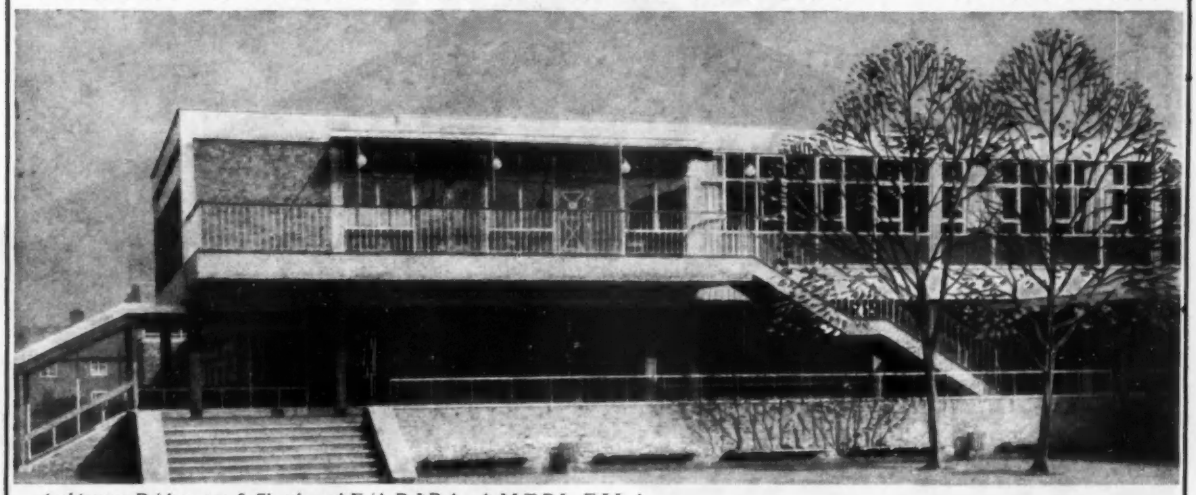

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News Summary

613 Details of salary increases for local government officers, including those for architects, surveyors and engineers, were announced on September 26.

615 A proposal that new buildings should be made less solid and should have a shorter life was submitted by Mr. A. G. Sheppard Fidler to an educational conference in Birmingham on September 24.

616 Some preliminary recommendations made recently by the RIBA to local authorities with the object of overcoming 'a disastrous state of affairs' in the redevelopment of the commercial centres of cities were described by Sir William Holford in his address to the conference of the Association of Municipal Corporations at Eastbourne on September 21.

618 A recently completed scheme for heating a salt-water swimming pool by solar energy is described.

619 A striking increase in house improvement work carried out with the aid of grants was referred to by Mr. Henry Brooke on September 19 when he opened an exhibition to inaugurate a 'Better Homes Week' at Leeds.

619 The scarcity of building land was again brought into prominence on September 24 during an address by Mr. K. L. G. Warne, FMB vice-president, to a Llandudno meeting of North Western regional members.

620 Industrial building statistics, issued recently by the Board of Trade, show that the area of estimated completions in 1959 was the lowest since 1953.

621 The erection of a 19-storey office building and the reconstruction of Holborn Viaduct and Moorgate stations were among proposals considered by the Court of Common Council which held its first meeting after the summer recess on September 22.

624 Urban sprawl as an obstacle to sound planning is the theme of an article on Tokyo's development problems.

'Late News' will be found overleaf, and 'News of the Week' on page 613

Builder

INCORPORATING ARCHITECTURE & THE BRITISH ARCHITECT

Vol. CXCIX. September 30th 1960 No. 6124

Published from 'The Builder' House, Catherine-street, Aldwych, London, WC2. Telephone: Temple Bar 6251-2-3-4. Annual subscription: £4; for six months £2. Single copies (including back numbers up to 12 months old) 1s. 6d. (post paid 2s.). Indices free on application.

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626 Optical Properties of Glazing Materials: Report of DSIR Colloquium

Flatlets for old People

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e plans for grouped
of details and particulars of building and heating costs; (2) plans and photographs of some completed schemes; and (3) some examples of conversions.

Particular stress is laid on the need for attention to detail in designing homes for old people. Windows should be at the right height and simple to open; shelves, cupboards and light switches within easy reach; baths fitted with hand-grips; staircases designed with shallow steps and floors with non-slip materials; and, since attention to open fires becomes a burden as people grow older and frailer, central heating is generally recommended. Much helpful advice of this order is given, and the examples of flatlets illustrated are excellent in design. As to conversions, the chief problem is to find houses suitable for adaptation at a reasonable cost. Three satisfactory schemes are shown.

There is little to criticise in this excellent handbook. One would have welcomed some details of construction and materials; and on the general question of planning it may be queried whether homes for old people ought ever to be of two storeys. Stairs, however well designed, are generally a nuisance to the elderly and a prime cause of accidents; while shared bathrooms and WCs, while no doubt adequate to the requirements, can never be as satisfactory as private accommodation. Nevertheless, this is a handbook on which the Ministry is to be warmly congratulated.

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Late News

King's College, Newcastle Extension

PLANNING PERMISSION has been given for a refectory and students' union extension, to cost £400,000, at King's College, Newcastle-upon-Tyne, it was announced on Tuesday. Building will commence next spring to plans by Messrs. Raglan Squire & Partners and William Whitfield, of London, SW1.

Sir Charles Barry Exhibition

TO MARK the centenary of the death of Sir Charles Barry (1795-1860) the Royal Institute of British Architects is to present an exhibition of original drawings from its library collection. The exhibition will be on view in the reception room at 66 Portland-place, London, W1, from October 10 to 22.

The Severn Bridge

TENDERS are to be invited this week for construction of the foundations and road works to the Severn Suspension Bridge, to cross the river between Aust and Beachley. The final design of the bridge, estimated to cost £11m., is now being considered by the Royal Fine Art Commission.

The Late G. H. Chettle, OBE

THE DEATH took place on September 25, in hospital, of Mr. George Hulbert Chettle, OBE, a former Inspector of Ancient Monuments, the Ministry of Works. He was 74.

Gloucester Contract

GLOUCESTER CORPORATION have now awarded a contract for the construction of a sewage treatment works, valued at £423,770, to M. J. Gleeson (Contractors) Ltd., of North Cheam, Surrey. Consulting engineers are Messrs. John Taylor & Sons, of Westminster, SW1.

The Builder

INCORPORATING ARCHITECTURE & THE BRITISH ARCHITECT

Vol. CXCIX. September 30th 1960 No. 6124

Published from 'The Builder' House, Catherine-street, Aldwych, London, WC2. Telephone: Temple Bar 6251-2-3-4. Annual subscription: £4; for six months £2. Single copies (including back numbers up to 12 months old) 1s. 6d. (post paid 2s.). Indices free on application.

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Flatlets for old People

WITH more and more people living longer than in earlier generations, there is a growing demand for housing to suit their special needs. It would appear that this is best provided in the form of flatlets. Just over two years ago the Ministry of Housing and Local Government published a handbook on the subject, and since then blocks of flatlets have been built in many parts of the country and more are either under construction or being planned. The Ministry has now published a further handbook under the title 'More Flatlets for Old People'* supplementing the earlier publication and showing something of what has been learned in the interim.

As the introduction to the handbook emphasises, it is essential not only to build more dwellings for old people but to provide different types to suit different needs. 'Many active elderly people, and particularly married couples, will prefer a self-contained flat or a small bungalow with its own garden. . . . For the less active and for those who live alone, something more labour-saving is often needed where the burden of housework is cut down and responsibilities reduced to the minimum.'

Flatlets with living room, bed recess and small kitchen (a bedroom and a living-room for married couples) are thought to be the most suitable form of accommodation, grouped in blocks with some shared facilities (i.e., bathrooms and WCs), and having a warden who can give assistance in case of illness or emergency. The handbook has three parts showing: (1) alternative plans for grouped schemes, with advice on the planning of details and particulars of building and heating costs; (2) plans and photographs of some completed schemes; and (3) some examples of conversions.

Particular stress is laid on the need for attention to detail in designing homes for old people. Windows should be at the right height and simple to open; shelves, cupboards and light switches within easy reach; baths fitted with hand-grips; staircases designed with shallow steps and floors with non-slip materials; and, since attention to open fires becomes a burden as people grow older and frailer, central heating is generally recommended. Much helpful advice of this order is given, and the examples of flatlets illustrated are excellent in design. As to conversions, the chief problem is to find houses suitable for adaptation at a reasonable cost. Three satisfactory schemes are shown.

There is little to criticise in this excellent handbook. One would have welcomed some details of construction and materials; and on the general question of planning it may be queried whether homes for old people ought ever to be of two storeys. Stairs, however well designed, are generally a nuisance to the elderly and a prime cause of accidents; while shared bathrooms and WCs, while no doubt adequate to the requirements, can never be as satisfactory as private accommodation. Nevertheless, this is a handbook on which the Ministry is to be warmly congratulated.

* London: HM Stationery Office, price 2s. net.

Notes of the Week

Central Area Redevelopment; The State of Monico; False Economy at Lanark; Building Matters; Paintings on Loan

SIR WILLIAM HOLFORD grasped with both hands the opportunity offered him by the Association of Municipal Corporations to address its annual conference of member councils on the subject of central area redevelopment. In his address (printed on page 616 of this issue) the President RIBA took the recently issued RIBA leaflet on 'Competition by Tender' as a basis, and advanced for the conference's consideration 'two propositions which,' said Sir William, 'we at the RIBA regard as fundamental. The first is that in matters of circulation, land-use and public enjoyment in the central area of a town, the local authority is the proper client. The second is that architecture can only be produced by those who have been trained in design and who give their whole time to it.'

In one direction Sir William went further than the RIBA statement. This was when he told the conference that in important schemes, especially where much assistance has been contributed by the local and the planning authorities, it was surely not unreasonable for them to require from the developer that his architect should be acceptable to them. 'It would,' he said, 'be a disaster if everything was of a high standard except the final appearance of the completed project.' Some examples of muddles now being made in important development schemes reinforced the PRIBA's suggestion which is clearly one to be acted upon. The paper underlines the lead which the Institute is now taking in the whole matter. We shall hope that it will persist in this good work.

The State of Monico

MEANWHILE, the PRIBA is deeply concerned with the most notable of city centre developments—that proposed for the Monico site, London. The plan which he is preparing at the instance of the London County Council for the whole area of Piccadilly Circus is a necessary preamble to the kind of building which Mr. Jack Cotton's interests will erect on the Monico site. 'The Times,' usually well informed in these matters, stated last week that while Dr. Walter Gropius, who recently was in London at Mr. Cotton's request, visited the site and attended a meeting between the site owners and the London County Council, he has not as yet accepted Mr. Cotton's invitation to act as architect. Should he, in the light of Sir William Holford's report, accept the commission, Professor R. Llewelyn Davies would act as English collaborator.

False Economy at Lanark

LANARK COUNTY COUNCIL'S recent decision to stop employing private architects for its building projects is a somewhat short-sighted one and not altogether justifiable in the interests of economy. By restricting the work of design to its own staff the council will draw on a much narrower range of talent; the more enterprising designers are more likely to be found in private practice, especially since incomes commensurate with such talent are not usually forthcoming from local authority employment. The Lanarkshire authorities may well save money, but by restricting design and competition they may also fail in some cases to provide buildings of architectural merit. We do not suggest that local authorities produce inferior design, for the facts show that this is certainly not so. Some of the best housing development has been by local authority architects' departments, and the school building programme has undoubtedly produced architecture that is much admired. Notwithstanding all this, the fact that local authorities have in the past employed private architects is surely proof that they are unable to cope unaided with their heavy building commitments without building up an expensive and inflexible organisation. Such a policy also inhibits new ideas, and it must be admitted that fresh ideas from independent sources provides an atmosphere of healthy competition that in the end must contribute towards maintaining the high standard that is expected. It is surely better to spend a little more on architects' fees and to provide buildings of lasting distinction than to persist in this retrograde policy.

Lanarkshire we understand will now have to strengthen its architect's department, which it can only do at the expense of the private architect. The proposal, however, of offering further inducement in the form of subsidised housing is a dubious one. It is surely an evasion of the real issue since salaries comparable at least to those available in private employment would undoubtedly be a greater inducement.

* * *

THE QUESTION of salaries for architects in local authority employment has recently been raised by Bristol Corpora-

The 'Picasso' bridge outside Wuppertal; on the right can be seen the brushwood temporary retainer for the embankment, its diamond pattern a pleasing feature of the motorways of this area. Designed by Dr. Ing. Heinz Grandenz. The photograph is reproduced, by kind permission, from 'Concrete Quarterly.'

tion since the city architect himself headed a list of twenty-four resignations from the department in the last two months. The situation is causing great consternation. Their's is certainly not an isolated case since other local authorities have had to recast their establishments, with considerably increased salaries for precisely the same reasons. Local authority staffs are finding better prospects in private practice, with hospital boards, and government departments.

College of Estate Management President

THE COLLEGE OF ESTATE MANAGEMENT, that admirable institution closely linked with London University and one in which the Royal Institution of Chartered Surveyors for long have taken active interest, has taken the splendid step of electing as President Sir Alexander Killick, the distinguished past-Secretary of the RICS. The CEM is no new interest of Sir Alexander; he has been a Governor for 28 years and has served on the board of studies in estate management of the University for a similar period. The fact that he continues in practical forms his interest in the profession to which he gave such long and distinguished service will ensure, when to this are added his outstanding personal qualities, the continuing well-being of the College.

His many friends within and without the surveying professions will have noted with pleasure that 'Alex' Killick has been by no means idle since his official retirement. He recently played a considerable part in the organisation of the ninth International Congress of Photogrammetry and is a member of the Mining Qualifications Board set up by the Minister of Fuel and Power. All will wish him a long and happy spell of Presidency.

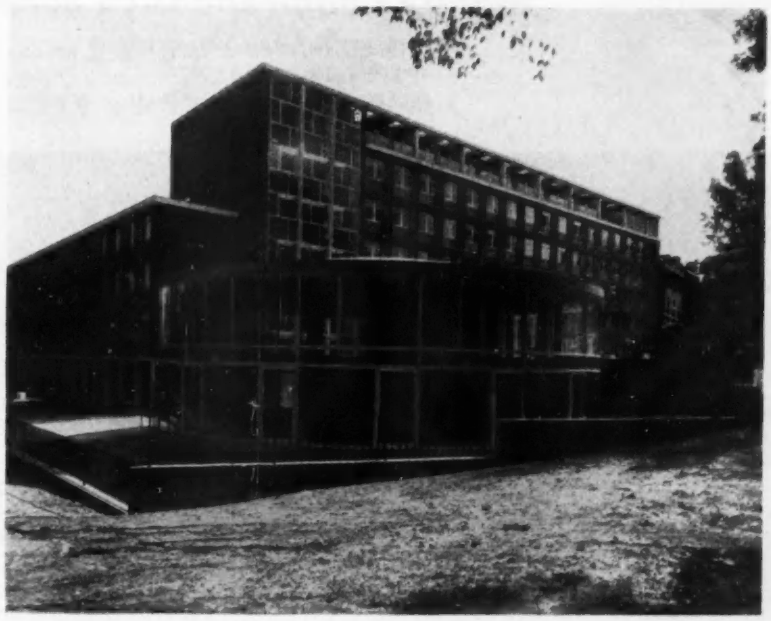
'Building Matters'

THE NEW SERIES of discussion programmes on 'Building Matters' (Network Three) got off to a good start on Tuesday evening, September 20, with a team consisting of Charles Crichton, builder, Edward Mills, architect, Harry Kaylor, civil engineer, Ken Pearce, builder and Andrew Roberts, quantity surveyor. The subject was 'A Team Job,' and if the speakers said nothing that was not perfectly familiar to all who get their living in building, at least they gave the uninitiated a very good idea of the organisation of the industry and of the problems which face it today.

Though there was a little hedging, at some of the chairman's leading questions, all speakers were agreed on the importance of such major points as the need for some joint education for the industry's professional personnel, the thorough planning of jobs, the principals getting together at the earliest possible moment, the client not changing his mind when decisions have been taken, and so forth.

* * *

IT IS NOT YET CLEAR whether the series is intended to appeal primarily to the layman or to the specialist. Perhaps the aim may be at both, in which case some dexterous balancing may be needed to avoid falling between two stools. The general background to the broadcasts was given in 'The Builder' last week. The new and more convenient time (Tuesday, 7.30 p.m.) is welcomed.



New offices for the British Embassy, United Kingdom missions, and delegations in Washington, opened by Mr. Selwyn Lloyd, Chancellor of the Exchequer, on September 24. The offices, which cost £1,225,000, are adjacent to the Embassy Residence and include 400 rooms and a conference hall (to seat 250). The building, the largest to be erected by the Ministry of Works overseas, is situated at the junction of Massachusetts-avenue and Observatory Circle, Washington; its two frontages are 180 ft. and 186 ft. respectively. In the foreground is the circular conference hall; it is 62 ft. in diameter and is surmounted by a copper-covered dome. Eric Bedford, CB, CVO, ARIBA, is the chief architect, Ministry of Works

* * *

NEXT TUESDAY the 'Building Matters' team will tackle 'communications.' Listeners will hear about one of the new ways of getting information across from manufacturers and suppliers to architects and designers; from them to the builder and contractor, and from the builder to his staff and operatives. Charles Crichton, the builder, and Gontran Goulden, deputy director of the Building Centre, will discuss this all-important topic with the help of Lawrence Brady and Andrew Roberts.

Paintings on Loan

BY THEIR OUTSTANDING initiative Holborn Borough Council have uncovered a source of artistic talent and beauty that would otherwise have remained hidden. Positive schemes to help the amateur and semi-professional artist are frequent but spasmodic and not, let it be admitted, very successful. Full marks in this respect must go to the Holborn authorities who, in 1954, introduced an admirable scheme which has become a permanent feature of their service both to local residents and the business fraternity. In November each year local artists are invited to submit original work for selection by a committee of experts. Selected works are then publicly exhibited and added to the permanent library collection. They are then made available on loan or for sale. The selection committee comprises Mr. James Fitton, RA, Mr. Claude Rogers, OBE, of the Slade School, and Mr. Edwin La Dell, of the Royal College of Art.

Several offices in the district make use of the scheme to increase their staff amenities and one chartered accountant regularly borrows twelve paintings, renewing them every three months. Fees, surprisingly small, payable by the lenders are given to the artist who of course receives full payment if his painting is sold. The borough librarian, Mr. James Swift, who is full of enthusiasm for the scheme, is justifiably pleased.

* * *

SINCE ITS INTRODUCTION some 11,000 paintings have been let out on loan and 55 have been sold. The young artists received £5,500 in lending fees and those whose work was sold received the full sale price. The new Central Library in Theobalds-road, designed by the borough architect, Mr. S. A. G. Cook, ARIBA, devotes a whole section to this collection.

Poet's Corner

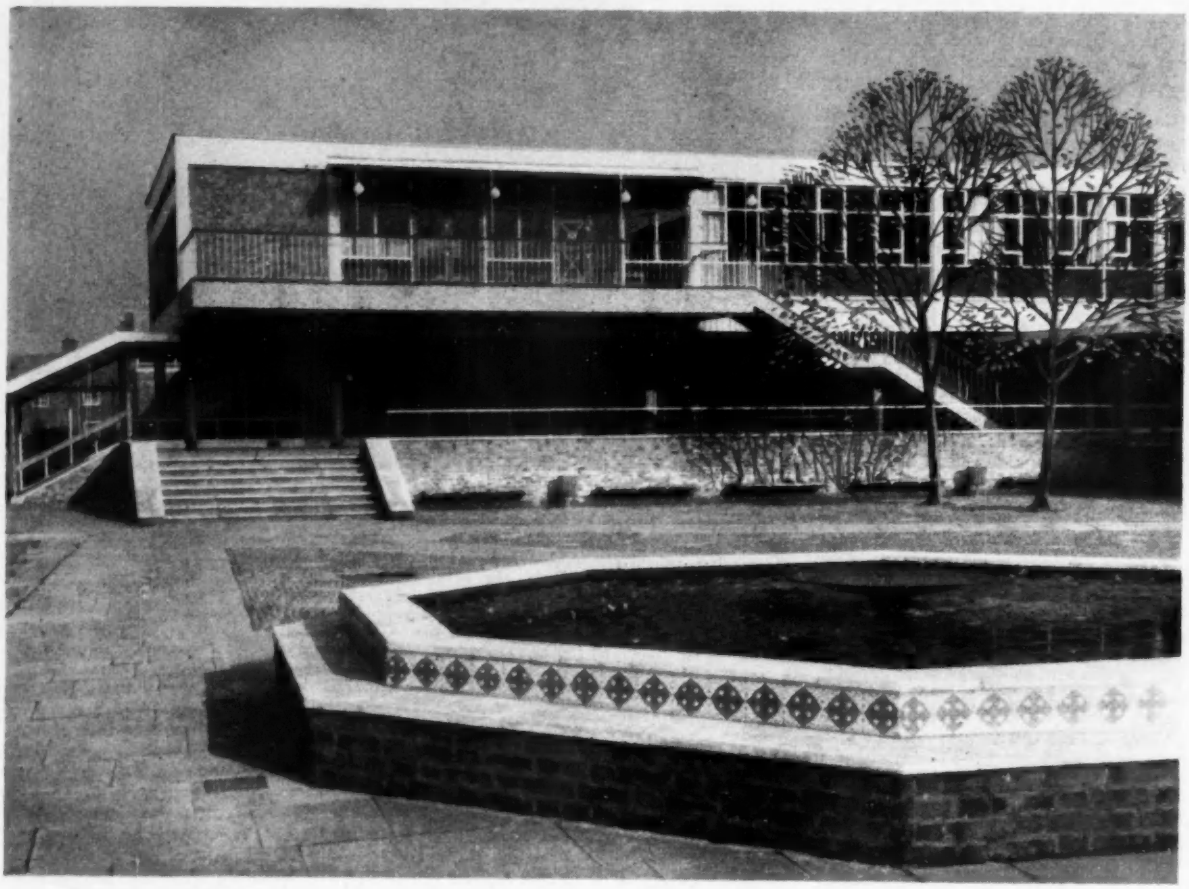
Sing a song of cathedrals,
Lutyens, Spence and all.
Three hundred architects
Waiting for the call.
When the conditions were opened
Imaginations set afire
With Sydney shells and Nervi domes
And Gothic tents with spire.

The assessors were in their convent,
Judging hard and late;
Architects back at drawing boards
Detailing garden gate.
Archbishop called the Press in,
Proclaimed the winners chosen,
Nearly three hundred architects
Felt a little frozen.

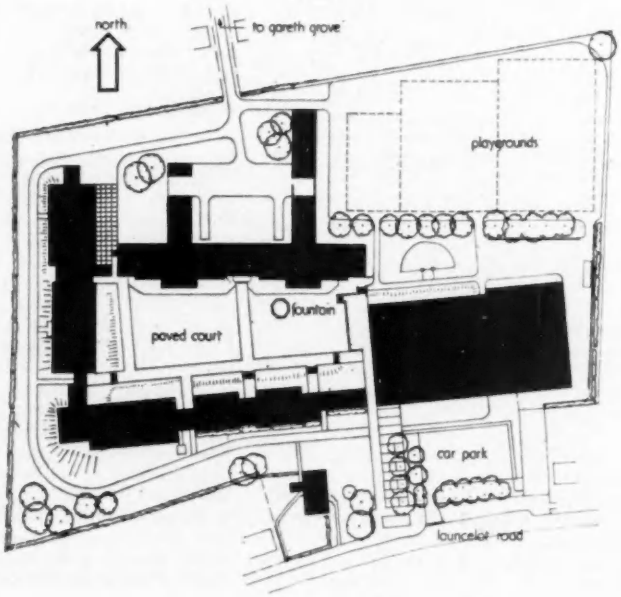
M. H.

Malory Comprehensive School, Lewisham

BRIDGWATER & SHEPHEARD, architects
G. EPSTEIN, partner in charge
L. INGLIS and C. WARD, architects in charge



courtyard and assembly hall block, from west



THIS LCC SCHOOL in Launcelot-road, Downham, provides accommodation for 1,680 boys and girls.

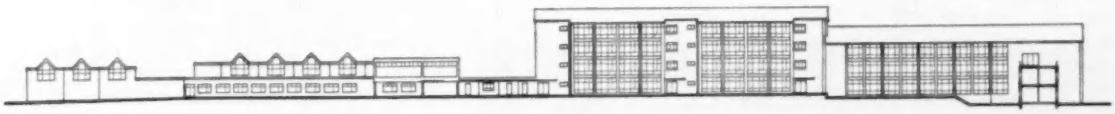
The school is named after Sir Thomas Malory, author of the Morte D'Arthur, and the eight houses into which it is divided bear the names of seven Arthurian knights and one wizard; Launcelot, Lionel, Galahad, Gawain, Perceval, Tristram, Bedivere and Merlin.

Malory is the first LCC school in which the house-system has been 'built-in.' Each house has its own house-room where the children have their clubs and meetings and where they dine, its own cloakrooms, study room and housemaster's room. The children are taught in forms containing members of every house, but all the normal administration is done on a house basis—attendance, careers, welfare and medical details, parents' interviews, sport, records, reports, leaving certificates and so on.

All pupils take a common course during their first three years. In their fourth and fifth years they follow one of several courses selected in accordance with their ability, aptitude and parents' wishes. Many will take the General

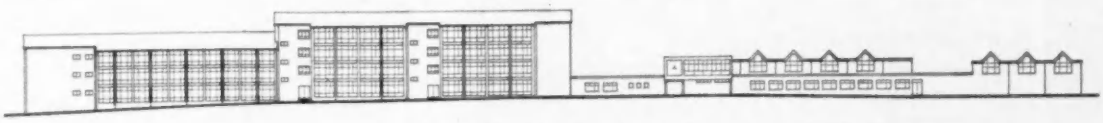
F. J. SAMUELY & PARTNERS, consulting engineers
J. A. BURRELL, FRICS, quantity surveyor
WILSON LOVATT & SONS LTD., general contractors

covered ways in the main courtyard

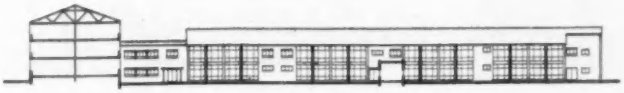


gyms, assembly halls, teaching and specialised teaching blocks

practical block, house bases, assembly, gyms



specialised teaching, teaching block, administration, assembly and gyms



specialised teaching block, and practical block

Malory Comprehensive School, Lewisham

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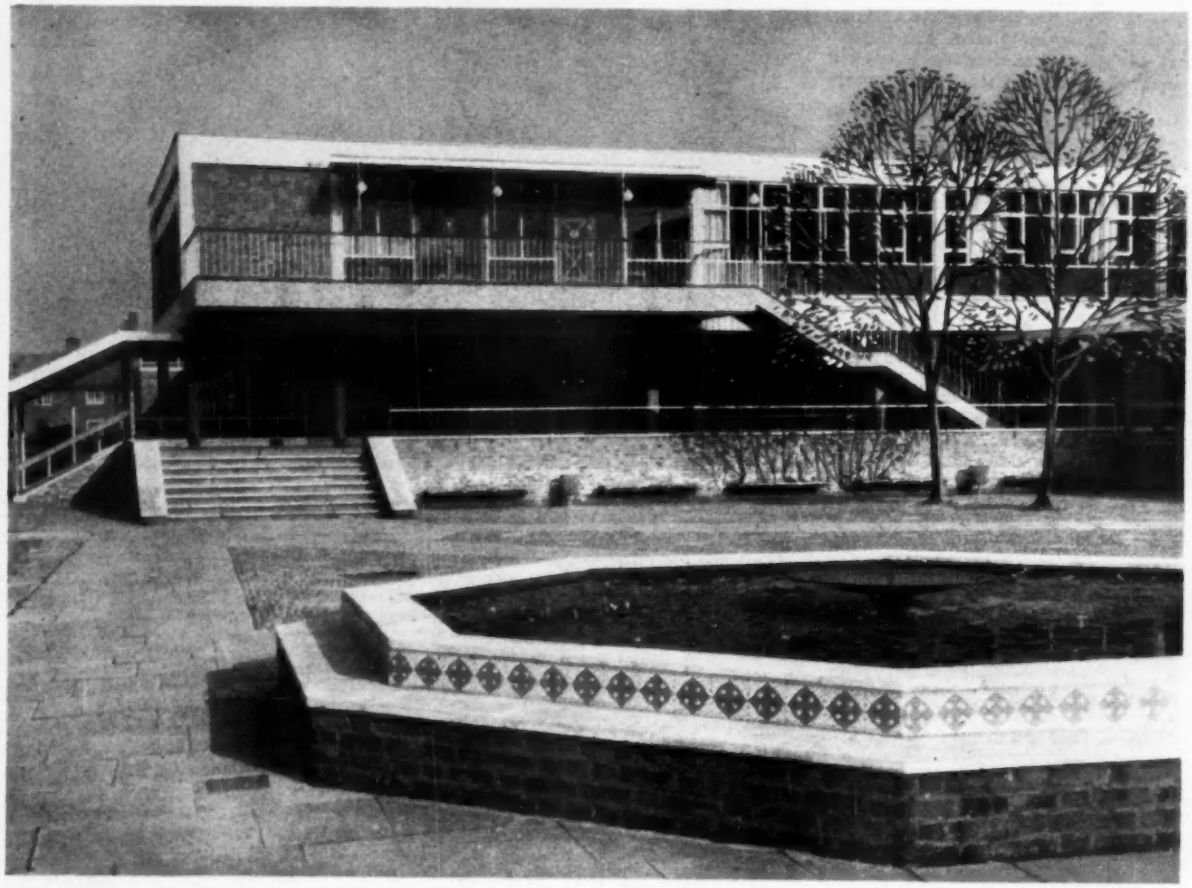
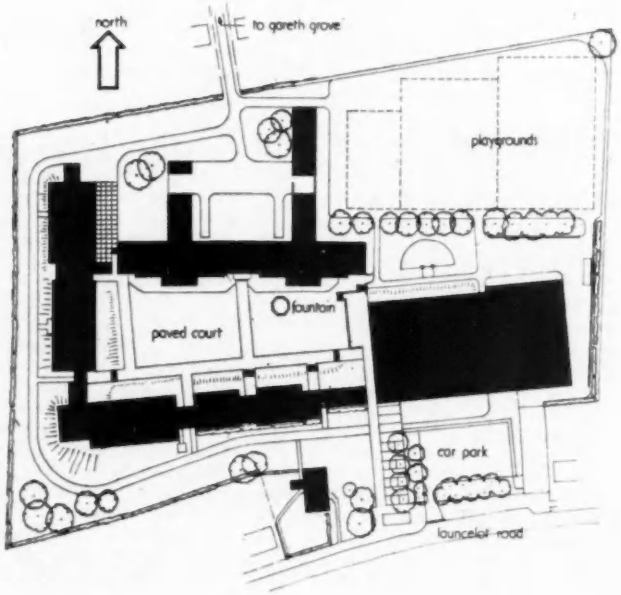
G. EPSTEIN, partner in charge
L. INGLIS and C. WARD, architects in charge



courtyard and assembly hall block, from west



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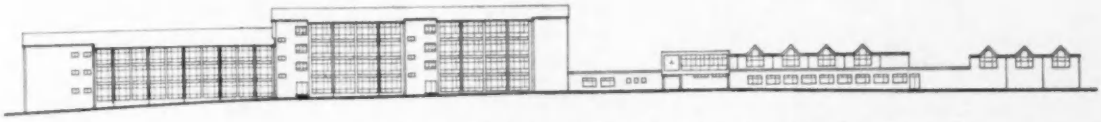
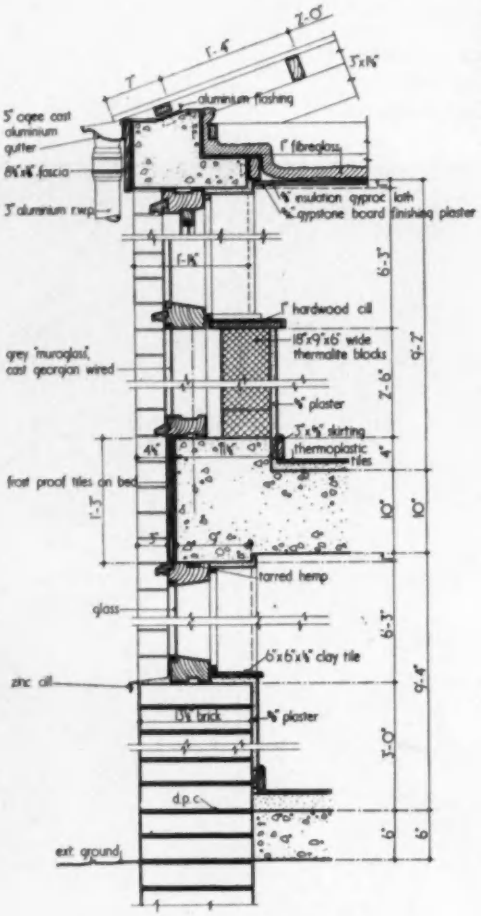
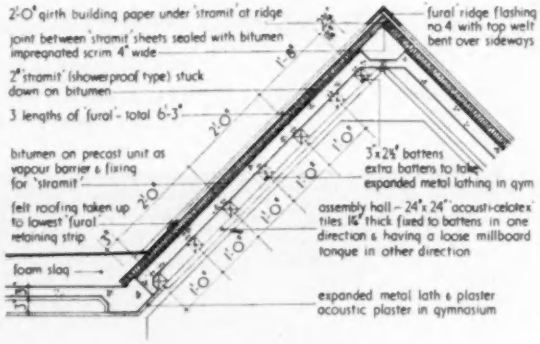


specialised teaching, teaching block, administration, assembly and gyms

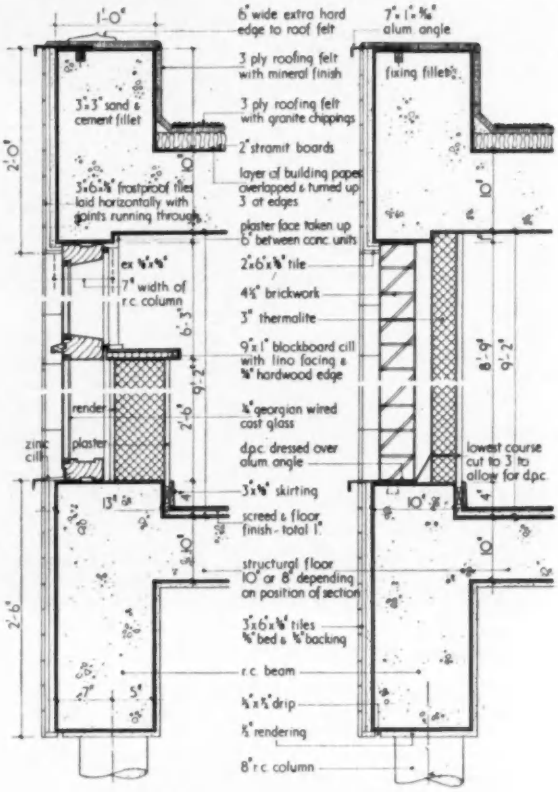
specialised teaching block, and practical block

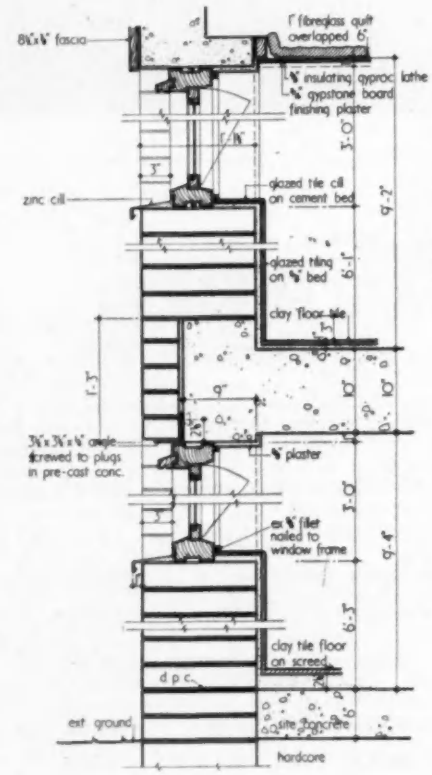


TYPICAL DETAIL OF FOLDED SLAB ROOF TO ASSEMBLY HALLS AND GYMS



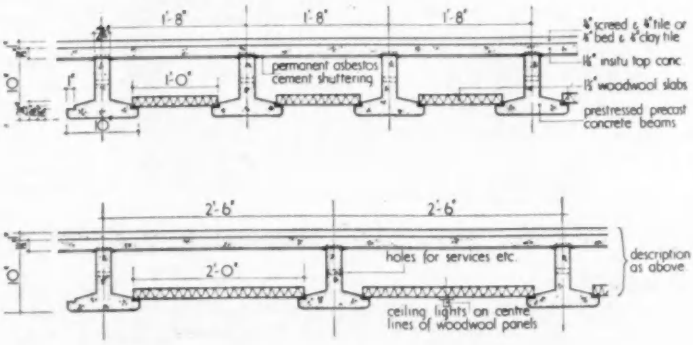
EXTERNAL WALLS OF ADMINISTRATION BLOCK
Scale: 1 in. = 4 ft.





EXTERNAL WALL DETAILS OF TEACHING AND PRACTICAL BLOCKS AND HOUSE BASES
Scale: 1 in. = 4 ft.

PRESTRESSED TEE SUSPENDED FLOOR UNITS, IN TEACHING AND PRACTICAL BLOCKS Scale: 1 in. = 2 ft.



Certificate of Education at ordinary level, and will then continue with advanced level and university scholarship work; others will take examinations in commercial or technical subjects. The accommodation for geometrical and engineering drawing, metalwork, engineering and housecraft is particularly fine.

The architects' main concern was to break down what is a very large school into units which are small, both physically and administratively, thus creating units which can be understood and appreciated by the children.

The site was formerly a playing field at the very top of a hill, very exposed to the wind. The buildings are therefore grouped round a paved courtyard which gives both shelter and a focus to the school. Surrounding the courtyard are four blocks: administration, assembly hall and gymnasia (2 storeys); main teaching block (4 storeys); workshop and domestic science block (2 storeys); and the house base block with two kitchens (2 storeys).

The roof construction of the assembly hall and gymnasia is a folded slab of pre-cast concrete units and 'in situ' concrete post-tensioned at the points of intersection. The remaining blocks are constructed with load-bearing brick piers and spine walls. The floors are pre-stressed inverted T-s with wood wool slabs laid in between, the soffits of both being sprayed with emulsion paint. This provides a relatively shallow floor, quickly erected, as well as space for electrical services which remain readily accessible, and a ceiling with approximately 50 per cent absorptive and 50 per cent reflective surfaces. The acoustics are therefore satisfactory without the added expense of a false ceiling.

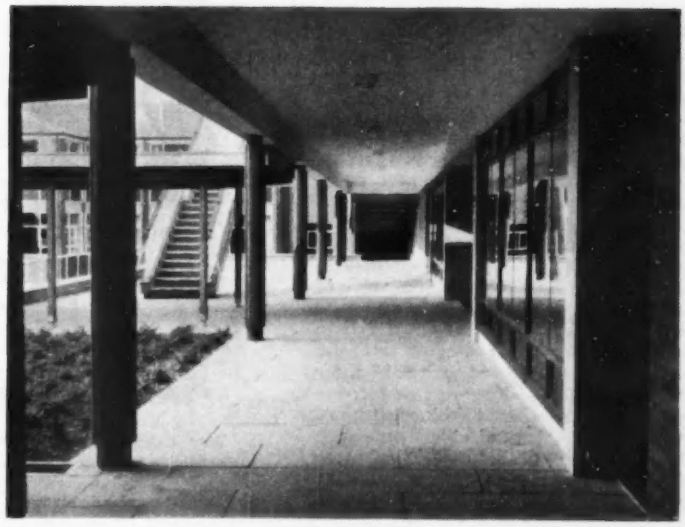
Tender Submitted: March 1955. Work started: April 1955. Work completed: May 1958. Tender price: £461,950. Superficial area of buildings: 121,682 sq. ft. Final cost: slightly below tender figure. (The above cost included 'additional costs,' i.e. external works, playgrounds, caretaker's house, evening institute, etc.) Nett cost per sq. ft.: £3 14s. 10d.

sub-contractors & suppliers:

Acoustic tiling: G. C. Horsburgh & Co. Ltd.; *blinds:* Tidmarsh & Sons Ltd.; *bricks:* Eastwoods Sales Ltd.; *cement glaze:* Cementglaze Ltd.; *cloakroom fittings:* Childs Constantine & Co. Ltd.; *courtyard paving:* Garden Landscapes (London) Ltd.; *drainage and external plumbing:* Hugh Twaddle & Son Ltd.; *electrical installation:* George E. Taylor & Co. (London) Ltd.; *expanded metal:* Expanded Metal Co. Ltd.; *external paint ('Unistuc');* The United Paint Co. Ltd.; *felt roofing:* Permanite Ltd.; *fencing:* Bayliss Jones & Bayliss Ltd.; *flagstaff:* J. W. Gray & Son Ltd.; *flush doors:* Jayanbee Joinery Ltd.; *folding doors:* The Bolton Gate Co. Ltd.; *food lifts:* George Johnson Ltd.; *fume cupboards:* Baird & Tatlock Ltd.; *Fural aluminium roofing:* L. Whittaker & Co. (London) Ltd.; *garden seats:* Boulton & Paul Ltd.; *glazing:* Aygee Ltd.; *chimney construction:* Chimneys Ltd.; *greenhouse:* William Wood & Sons Ltd.; *gymnasium equipment:* Olympic Gymnasium Co. Ltd.; *heating, ventilating & plumbing:* Matthew Hall & Co. Ltd.; *high level window gear:* Teleflex Products Ltd.; *ironmongery:* Lockerbie & Wilkinson Ltd.; *joinery:* Gazes Ltd.; *lettering:* Drakard & Humble Ltd.; *paint:* ICI Paints Division; *planting and sowing:* Knowles & Weller Ltd.; *precast and prestressed concrete:* Costain Concrete Co. Ltd.; *pvc and lino flooring:* Haskell Robertson Ltd.; *railings and balustrades:* Clark Hunt & Co. Ltd.; *roof lights:* The Velux Co. Ltd.; *sanitary fittings:* Adamsez Ltd.; *sliding door gear:* E. Hill Aldam & Co. Ltd.; *tarmac playgrounds:* A. C. W. Hobman & Co. Ltd.; *terrazzo marble paving and mosaic:* J. Whitehead & Sons Ltd.; *tiling:* Purbeck Decorative Tile Co. Ltd.; *wc partitions:* Venesta Ltd.; *wooden floors:* Vigers Bros. Ltd.; *wooden windows:* Walter Lawrence & Sons Ltd.

top: caretaker's bungalow and main entrance to the school from Launcelot - road. Left: foyer and stairs to assembly hall gallery. Below: main entrance colonnade with foyer right and courtyard to the left

Malory Comprehensive School



Letters to the Editor

'No More Work for Private Architects'; Modular Planned Flats, Kensington; The Personnel Shortage and the Future; Clerks of Works' Examinations

SIR,—It must be most satisfying to the ratepayers of Lanark to know that their council can show a fifty per cent saving on architectural services by using their own staff. Could it possibly be, however, that the over-all expense of the department has been omitted in this calculation?

'PRIVATE PRACTICE'
London.

Modular Planned Flats, Kensington

SIR,—Mr. W. Brown's letter published in 'The Builder' of September 23 is a fair sample of the muddled thinking which prevails throughout the building industry about modular co-ordination.

The reason for using the 4 in. module in the Kensington project was to achieve standardisation of the main elements in the structural frame. This was extremely successful. All spaces between columns and windows and the columns and windows themselves are to modular sizes, i.e., multiples of 4 in. It follows quite logically that dimensions of all the components which fit between these columns are bound to be modular also.

The external non-modular dimensions upon which Mr. Brown has seized are the result of adding a brickwork skin round the building. The use of these standard 9 in. x 4½ in. x 3 in. bricks created no difficulty, as the architect left plenty of air space round the building to accommodate them. It is only where one component meets another that the problem of accurate dimensioning exists.

DONALD FRASER,
Chairman of the Council,
The Modular Society,
1 Bedford-square, WC1.

The Personnel Shortage and the Future

SIR,—On the question of personnel shortage in the building industry, I readily agree with your correspondent 'Under Employed' that work is unequally (and perhaps unfairly) distributed, and with your other correspondent 'Manager' that supervisory and administrative staff is increasing unduly; but these facts do not wholly account for the spate of 'Appointments Open' that has been flooding your advertisement pages for a long time past.

Can it be doubted that building work is increasing out of proportion to personnel? According to statistics published in your issue for September 16, the value of new orders for constructional work obtained by contractors in Great Britain during the first six months of this year was £925m. as compared with £795m. for the same period of last year, an increase of £130m. The effect of this must be to increase the demand for personnel; already local authorities are complaining of the difficulty of obtaining and retaining enough technical and administrative staff to run their affairs efficiently owing to the greater financial attractions of work in industry. It may well be that local authority employees are underpaid, but the inflationary tendency of competition for limited personnel is not to be denied.

The main purpose of my letter, however, was to inquire whether any attempt is being made to equate personnel with the probable demands upon the industry over a period of years. If it is not, then no great powers of divination are needed to foresee an intensification of our difficulties, with the distinct possibility of the government stepping in if matters get too much out of hand.

In conclusion, may I ask 'Under Employed' and 'Manager' whether they noticed another eighteen or so pages of 'Appointments Open,' public and private, in your current issue, about 2½ pages up on the week before?

OBSERVER.

Clerks of Works' Examinations

SIR,—I hope you will forgive this very belated comment on your leader in the issue of July 22 in which you made some very encouraging comments concerning the Institute of Clerks of Works' new recommendations for technical college courses, but went on to suggest that the Institute ought to have given consideration to the possibility of candidates preparing for the Part II examination by following technical college courses for building foremen.

I was concerned to some small extent in the discussions which led to the Institute's recent recommendations, and although I am not in the position to speak authoritively for the Institute I think it would be fair to say at once, that the Institute has always regarded the general foreman's practical and theoretical training as an ideal preparation for a clerk of works and indeed many Institute members are most emphatically of the opinion that the most able clerk of works is one who initially has served an apprenticeship to a craft and has then ascended through the hierarchy of journeyman, craft-foreman and general foreman. There is, however, a growing feeling in the Institute that the duties and responsibilities of the modern clerk of works are inescapably becoming comparable with those of a professional member of the building team, and it is largely a consequence of this new trend of thought which has prompted the Institute to issue these recommendations for college-based courses.

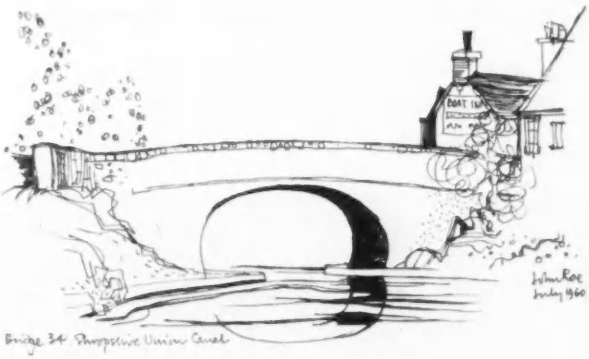
'We don't recognise RIBA Exams here—and we have our own codes of professional conduct!'

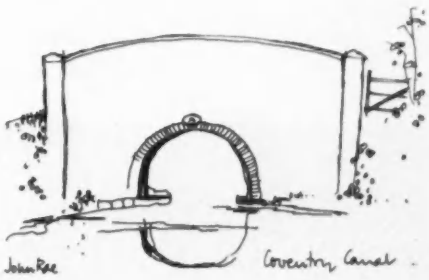
The first category of course recommended is aimed at a full preparation for the Part II examination, and you were quite right when you said that it would be difficult to raise sufficient numbers to justify such a course. It might indeed be possible to follow your suggestion for grouping this particular type of course with foremanship courses to a certain extent.

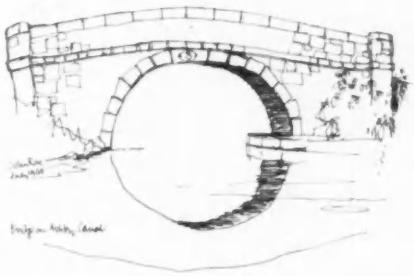
It was, however, the second and third categories of course outlined in the new recommendations which the Institute hoped would prove to be more workable in the technical colleges, and it is a matter of considerable significance that the Institute has recognised the potential value of the Higher National Certificate student and has gone to some lengths to lower examination age limits and so remove that exasperating hiatus which has existed hitherto between the point at which the young HNC student of some 23 or 24 years completes his studies, and the 28 years minimum age limit for Part II examination entrants. A further point of some significance is that the Institute by its recognition of the Higher National Certificate has shown that it is prepared to accept candidates who have been trained on a much broader basis than building foremen.

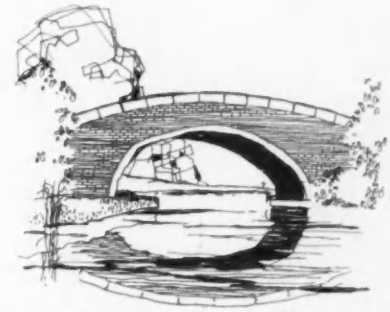
Your point about the possibility of giving recognition to the City and Guilds certificate (presumably in general foremanship studies) may well have been considered by the examinations board of the Institute; certainly this certificate is a top-ranking qualification in foremanship and it might be reasonable to expect some degree of exemption on a subject for subject basis. I feel bound to say, however, that your criticism of the Institute for failing to include some reference in its publications to the possibility of study in foremanship courses is a trifle unjustified. After all it is surely the business of the technical college to decide what is and what is not expedient in the economic planning of a course, and I feel sure you will agree that heads of college building departments are usually quite versatile when it comes to grouping students whose aims are different but whose needs are similar.

N. C. SIDWELL [MSC],
Head of Department of Building,
Heriot-Watt College, Edinburgh.





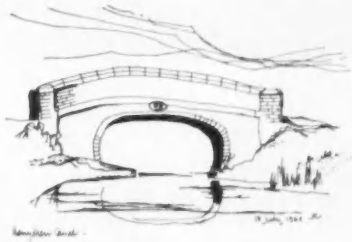


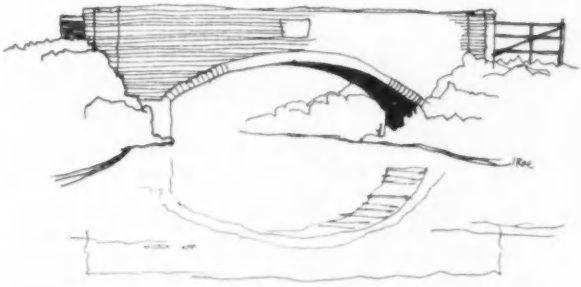


English Canal Bridges

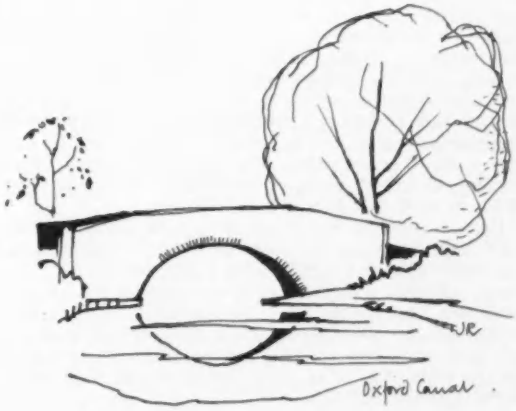
THE CHARM OF FUNCTIONAL DESIGN

DRAWN BY *John Rae*





Bridge on Trent & Mersey Canal . 26 July 1960



Oxford Canal .

Winfrith Heath Atomic Energy Establishment

T. L. VINEY, FRIBA, director of works and buildings, UKAEA

R. S. BROCKLESBY, ARIBA, chief architect

T. ROTHWELL, DIP.ARCH.(L'POOL), ARIBA, assistant chief architect

the reactor group offices

A COMPLETE and self-contained Atomic Research Establishment was required at Winfrith for the continuation of research work commenced at Harwell and, in particular, work on advanced prototypes of nuclear reactors, including a high temperature gas cooled reactor of an advanced type for mutual research work by scientists of the OEEC Countries.

Initially, effort was put into the selection of a convenient site and in the preparation of sketch designs by teams of engineers from Harwell and by the architects and engineers of the Ministry of Works. In 1957, when a suitable site had been found and surveyed, and subsequent to a public inquiry (following which the Minister of Housing and Local Government gave his consent to the use of Winfrith Heath) it was decided that the design and construction of the buildings and civil engineering works would be carried out by the Works and Buildings Department of the Development & Engineering Group of the UKAEA under the direction of Mr. T. L. Viney, FRIBA, and in liaison with a Technical Planning Group set up by AERE Harwell under the direction of Mr. J. R. V. Dolphin, CBE.

Before work on the main site could commence an old RAF camp at Warmwell (between Winfrith and Dorchester) was rehabilitated and additions made for use as a labour camp. Shortly after this work commenced (in July, 1957) work was also started enlarging the public road from A352 to the site and commencing the construction of roads, drainage, trial holes and a boring for the temporary water supply on the main site. The main contractor for this work was W. E. Chivers and Sons Ltd.

The site for the initial phases of the project measures some 1.6 miles in length with an irregular width about 1.3 miles across at the widest point. It is situated on predominantly heath land about two miles to the west of the village of Wool. The northern boundary is the main Southern Region railway line from Poole to Weymouth and close to the southern boundary runs the main Wareham to Dorchester road A352. The nature of the site itself was mostly of peaty heathland with a small proportion of rough pasture. It was badly drained and liable to marsh and flood conditions each winter. The underlying soil is sand and gravel with the water table within 2 ft. of the surface.

The main aspects of the project which the designers had to consider were the active effluent pipe line, the central zone of administrative, workshop and similar buildings, and the reactors. Associated with these were the usual inherent problems of drainage, water and power supply, of sewage disposal and of access together with the desirability of grouping, as far as possible, buildings with active arisings separately from those of a non-active character.

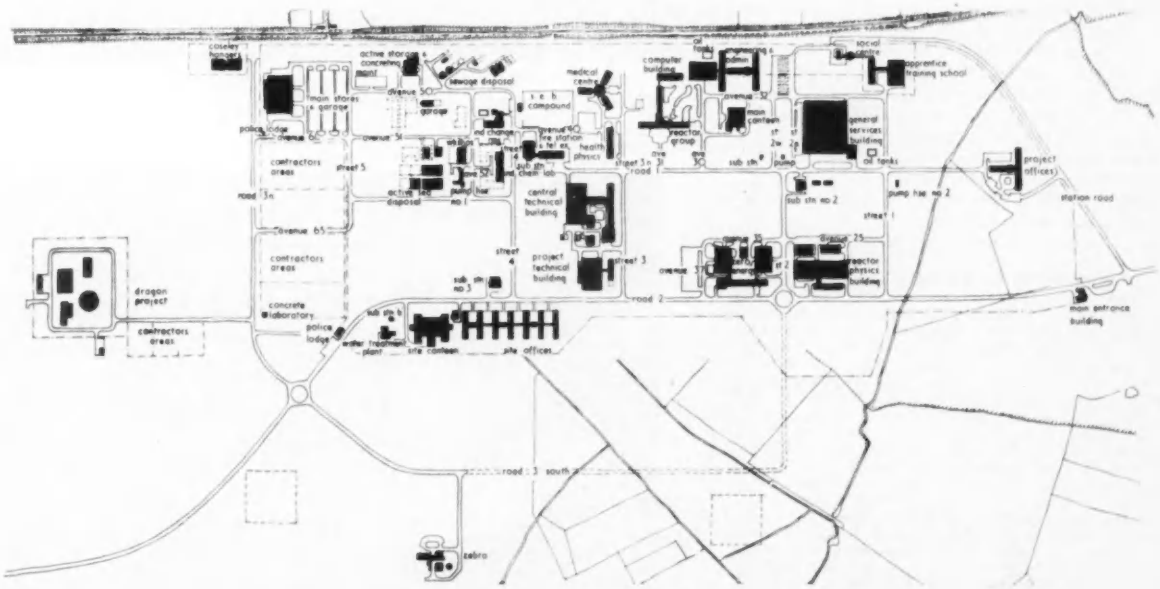
It was decided to utilise the flat central portion of the site for administrative buildings and they were laid out on a roughly east-west axis, with roads forming a grid which gives adequate room for subsequent expansion. The reactor sites, six in number, are spaced at wide intervals (for safety reasons) in a rough semi-circle to the south and west of the central zone. It was decided to divide the site into two sections for the purpose of surface water drainage, the eastern section draining into the River Win and the western area

R. B. PHILPOTT, ARIBA, R. N. SNADDEN, ARIBA, senior architects

T. C. WATERS, MISTRUCT.E, chief structural engineer

TURRIFF CONSTRUCTION CORPORATION LTD., general contractors

the main canteen, with reactor group offices in background



draining to an existing watercourse and from this to the River Frome.

In the general considerations governing the planning of all buildings a number of overriding factors had to be taken into account. The first of these was the County Planning Committee's wish that the buildings should in some measure blend into the landscape. This requirement was met by the decision to use epoxy resin painted asbestos cement as a covering material for the majority of the 'shed' type buildings and by attempting to keep the heights of buildings generally below 50 ft. The second was to try to obtain a sense of intimacy that was felt to be appropriate to a research establishment by the deliberate use of a semi-domestic scale and character in buildings of a smaller size. This characteristic is shown in the employment of pitched copper roofs to several of the smaller buildings and use of load bearing brick walls.

The third special factor was that of structure. The information gained from the trial holes proved that the sand and gravel formations below ground would provide a somewhat unsatisfactory foundation and this has frequently given rise directly to the building form. Not least, of course, were the considerations of economy and speed in erection; the latter reason in particular gave rise to the use of steel frames and asbestos cement cladding for the 'shed' buildings.

Temporary Offices and Canteen

Although regarded quite properly as 'temporary' it was realised that these buildings would be in use for some years and they were, therefore, given much thought in design and construction. They take the general form of office wings each 160 ft. long by 28 ft. wide, constructed of pre-fabricated timber members with timber window frames and external plywood panels.

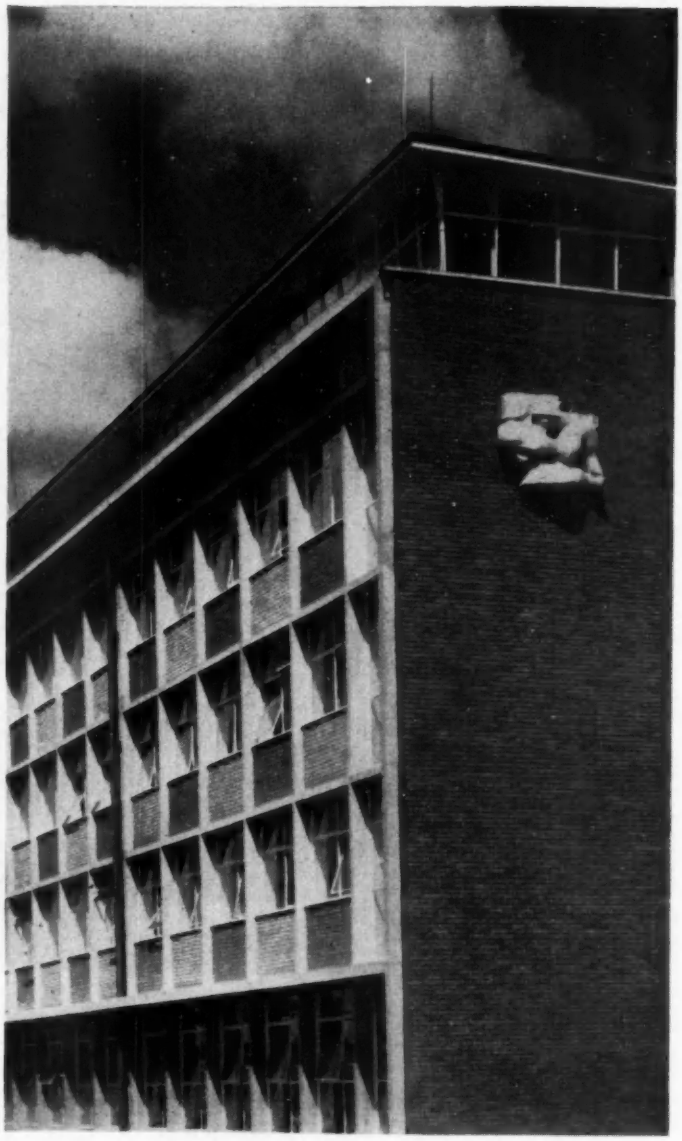
The canteen is of similar construction, partly flat roofed, and can provide accommodation for over 1,000 people, at one sitting.

Reactor Hall No. 2

A requirement was for a concrete pit 30 ft. deep, 80 ft. long and 20 ft. wide. The pit has massive concrete walls (the thickness was also needed for biological shielding) which are used as foundations for the central portion of the reactor hall which is 47 ft. wide and 51 ft. high. This is constructed of steel portal frames at 13 ft. 4 in. centres. On either side of the central hall which contains a 10-ton crane are lower annexes. To avoid the risk of differential settlement these were founded on pre-cast concrete piles. The whole building was clad with green asbestos cement double sheeting metal windows and metal decked roof.

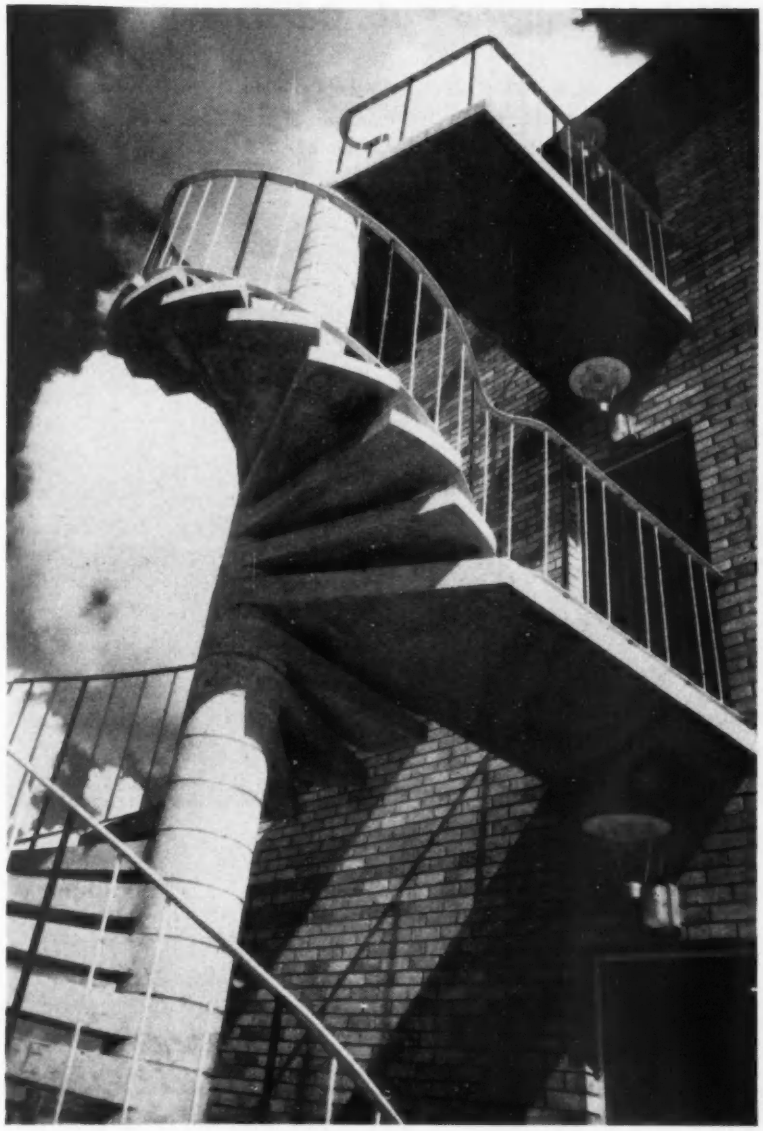
sub-contractors & suppliers:

Aish & Co. Ltd., British Oxygen Gases Ltd., House & Co., Pye Tele Communication Service, Regent Oil Co. Ltd., Wakefield Dick Industrial Oils Ltd., Sharp, Jones & Co. Ltd., F. L. Vincent & Sons, Henry J. Greenham Ltd., Hall & Co. Ltd., A. H. Herbert & Co. Ltd., Reginald Lugg & Co. Ltd., Charles Mitchell & Sons Ltd., J. R. Smith & Sons Ltd., Staveley Iron & Chemical Co. Ltd., Robert Stotesbury Ltd., Sykes & Sons (Poole) Ltd., Webb Major & Co. Ltd., Golding & Ansell Ltd., Bradleys (Darleston) Ltd., Metal Agencies Co. Ltd., Montague L. Meyer Ltd., Parker Timber Co. Ltd., Rawlplug Co. Ltd., Savack Services Ltd., Sealocrete Products Ltd., Bath & Portland Stone Firms Ltd., Broads Manufacturing Co. Ltd., W. T. Burden & Co. Ltd., Chemical Building Products Ltd., William Dibben & Sons Ltd., Expandite Ltd., B. Finch & Co. Ltd., Gray, Dallen & Lane Ltd., Kennedy's Ltd., W. E. Masters, McCreath Taylor, Roads Construction



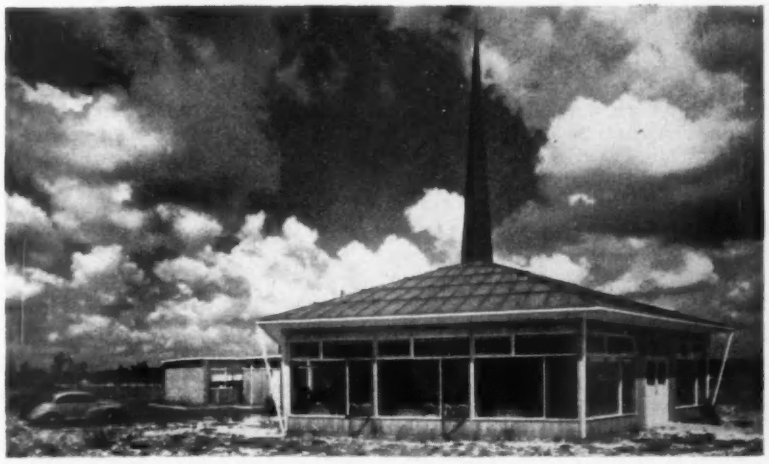
detail of the reactor group offices

interior of canteen



precast spiral stair, health physics building

the social centre



Ltd., Universal Engineering Co. Ltd., E. H. Smith (Westhaven) Ltd., Alexander Duckham Ltd., G.K.N. Reinforcements Ltd., Industrial Concrete Products Ltd., Regent Oil Co. Ltd., Stanton Ironworks Co. Ltd., R.I.W. Protective Products, Square Grip Reinforcement Co. Ltd.

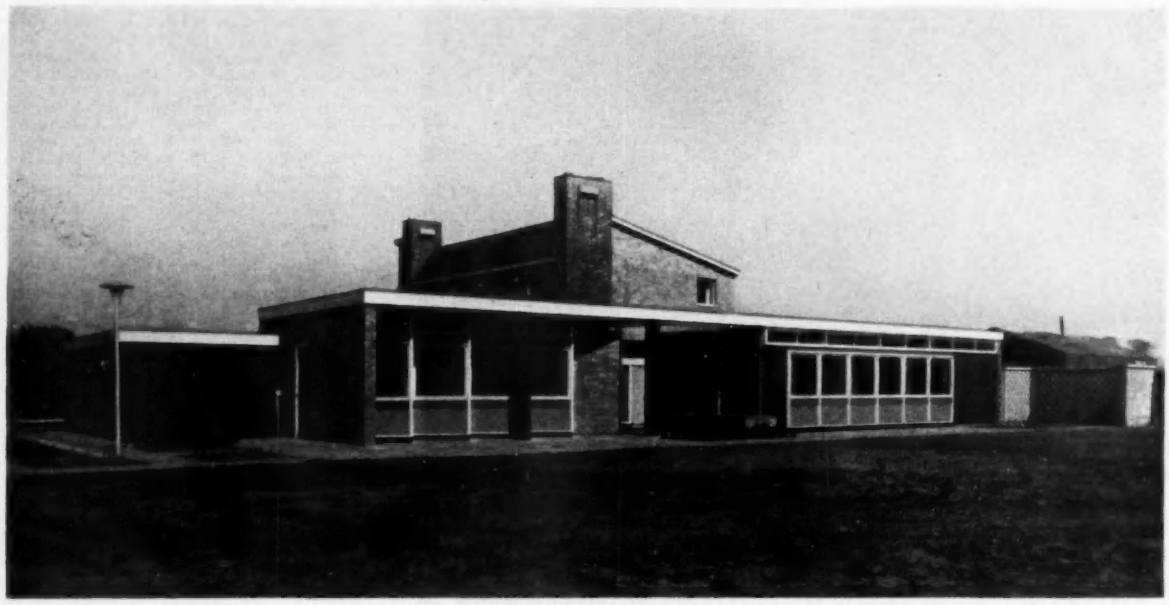
Caslake Ltd., Mills Scaffold Co. Ltd., The Southbourne Turf Co., Sherry & Haycock Ltd., J. & E. Hall Ltd., Industrial Catering Ltd., L. Pinnegar & Co. Ltd., James Drewitt & Sons Ltd., William Briggs & Son Ltd., Henry Hope & Sons Ltd., R. W. Purdie & Co. Ltd., Hall & Co. Ltd., Limmer & Trinidad Lake Asphalt Co. Ltd., Isocrete Ltd., Ford Vincent & Co. Ltd., Manchester Slate Co. Ltd., Roneo Ltd., Sankey Sheldon Ltd., Handy Angle Ltd., Jaconello Ltd., Griffin & George Ltd., Leyland & Birmingham Rubber Co. Ltd., Soil Mechanics Ltd., Terrapin Ltd., Industrial Cooling Equipment Ltd., Sundeala Sanders & Forster Ltd., Darlington Insulation Co. Ltd., Universal Engineering Co. (Charlestown) Ltd., Semtex Ltd., Horsley Smith & Co. (Building Insulation) Ltd., Roads Reconstruction (1934) Ltd., Permanite Ltd., Robertson Thain Ltd., Crocock & Day Ltd., W. G. Parrish, Faulkner Green & Co. Ltd. Greene & Co., Ltd.; F. Labbett & Sons, Robert Watson & Co. Ltd. (Constructional Engineers), E. C. & J. Keay Ltd., Gardiner Sons & Co. Ltd., Fireproof Shutter & Door Co., G. Brady & Co. Ltd., Felt Roofing Specialists Ltd., Haskins Rolling Shutters, Hills (West Bromwich) Ltd., Wests Piling & Construction Co. Ltd., Carter & Co. (London) Ltd., Bath & Portland Stone Firms, Ltd., Concrete (Southern) Ltd., Golding & Ansell Ltd., Hansard Tilers Ltd., T. E. Cundy & Son Ltd., Rowe Industries (Kirkby) Ltd., F. E. Beaumont Ltd., Modular Concrete Co. Ltd., Savack Services Ltd., Pre-Piling Surveys Ltd., E. Morris A.T.D., Builders Iron & Zinc Work Ltd., Ruberoid Co. Ltd., St. Aldhelme Quarry & Masonry, R. B. Webb Ltd., T. Clarke & Co. Ltd., Mathew Hall & Co. Ltd., Wing Gates Engineering Co. Ltd., W. J. Simms Sons & Cooke Ltd., Hooper & Ashby Ltd., Mendip Chemical Engineering Ltd., J. Long & Sons (Bath) Ltd., Geo. E. Taylor & Co. (London) Ltd., Rudders & Paynes, The London Lift Co. Ltd., Blight & White Ltd., H. & C. Davis & Co. Ltd., Permali Ltd., Messrs. Sandberg, J. I. Thorneycroft & Co. Ltd., Pollock Brothers (London Ltd., Cook & Co. Ltd., Colt Ventilation Ltd., British Patent Glazing Co. Ltd., L. Whittaker & Co. (London) Ltd.; The Marley Tile Co. Ltd.

Winfrith Heath

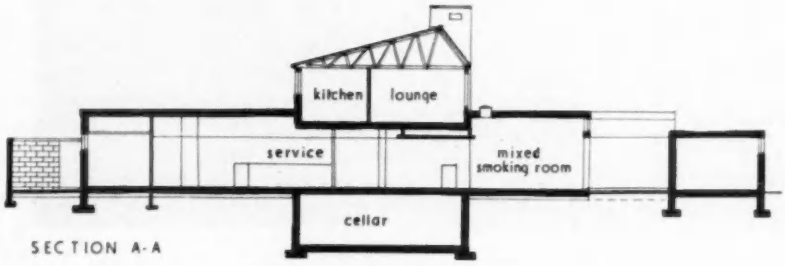
A.E. Establishment

State-Managed Pub, Carlisle

H. A. METAYERS, OBE, BA(ARCH), FRIBA, chief architect MoW
A. BALL, FRIBA, DIPTP, architect in charge
M. A. BROOKS, ARIBA, assistant



top, reading left to right, lavatory block, saw-tooth elevation to the mixed smoking room, sheltered area, public bar, and managers flat at first floor. Right, long section, scale: 1 in. = 24 ft.



SECTION A-A

THE CARLISLE AND DISTRICT STATE MANAGEMENT SCHEME required a large licensed house to serve the new and growing neighbourhood unit of Morton Park on the outskirts of Carlisle. The site is part of the shopping centre and overlooks playing fields at front and rear.

The house is larger than that usually provided by the scheme and presented problems in the attainment of domestic scale both internally and externally. A more intimate atmosphere was obtained internally by dividing the large rooms into a series of smaller drinking areas by the use of fixed seating and piers. A small internal patio with planting, pool and fountain, allows natural lighting to reach all parts of the mixed smoking room.

Walls generally are plastered and finished either with plastic coated cloth, wallpaper, or emulsion paint, and floors are covered with lino tiles. Joinery is generally of Abura or mahogany, but the screen between the smoking rooms has panels faced with Rose Zebrano, all finished with plastic polish.

Ventilation of public rooms is by means of a mechanical air extract system, and heating is by open fires and electric floor warming elements embedded in the screed. Fibreglass filling is provided in the cavity walls and behind Muroglass panels. The roof has a Vermiculite screed, and the ceiling is of sprayed Pyroc on plasterboard, suspended on battens to provide an air space.

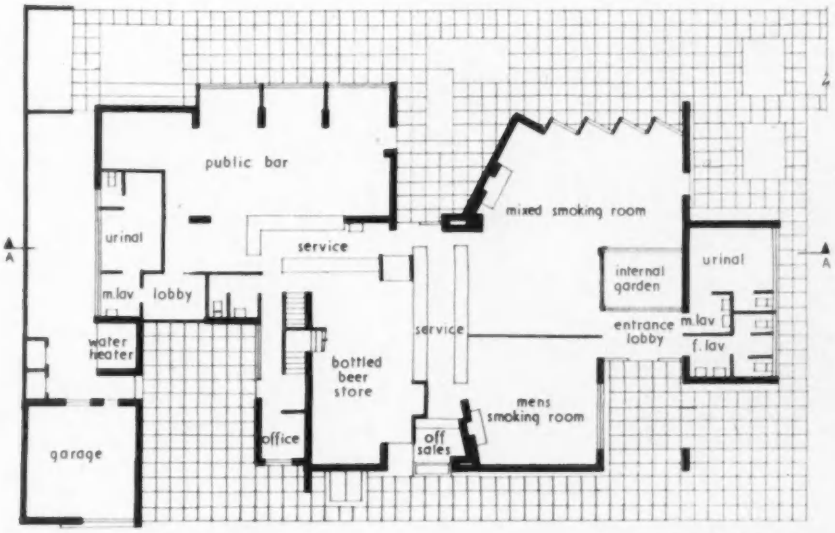
The underground cellar and bottled beer store at ground level have automatic controlled equipment to maintain the beer at its correct temperature. Back fittings to both bars have ice cube-making units and chilled trays for bottled beer. Beer pumps are arranged in pairs to facilitate service during busy periods.

The flat for the manager is situated over the quieter part of the premises and has its own private entrance.

Domestic hot water is supplied from a central electric water storage heater to the flat, bar sinks, cellar, and to spray taps in the public lavatories.

Generous terraces are provided for the use of customers during the summer months, and a large paved car-park. The amended contract sum was £29,198.

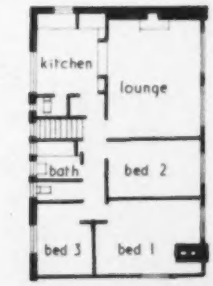
R. G. READ, FRICS, quantity surveyor
A. G. P. THATCHER, BSC, structural engineer
JOHN LAING & SON LTD., general contractors



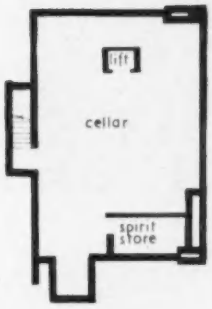
GROUND FLOOR PLAN

SCALE: 1 in. = 24 ft.

MANAGER'S FLAT FIRST FLOOR



BEER CELLAR



1

sub-contractors & suppliers:

roof truss design: Timber Development Association Ltd.; *electrical installation:* David Thompson & Sons Ltd.; *beer engines:* Gaskell & Chambers (Lancs.) Ltd.; *dog grates:* Selbourne Engineering Co. Ltd.; *inn sign:* Sunderland Structural Steel Ltd.; *illuminated sign box:* Drakard & Humble Ltd.; *ironmongery:* Alfred A. Roberts Ltd.; *lettering:* Ward & Co. (Letters) Ltd.; *precast concrete floors and roofs:* Concrete (Northern) Ltd.; *glamorock panels:* Duval Autos Ltd.; *larder vent:* Greenwoods & Airvac Ventilating Co. Ltd.; *Pyrok decorative treatment:* Pyrok Contracts Ltd.; *roof lights:* Lenscrete Ltd. and Cordar Ltd.; *mosaics:* Dennis M. Williams Ltd.; *cooling plant:* J. & E. Hall Ltd.; *plastic louvres:* Scemco; *linoleum and accotile:* Lonsdale Brick & Tile Works Ltd.; *double glazing:* Aygee Ltd.; *garage door:* Westland Engineers Ltd.; *copper roof:* L. Carter & Son Ltd.; *grilles:* Richard Crittall Marine Ltd.; *extractor fans:* Fenton Byrn & Co. Ltd.; *shelf ladders:* James Bendall & Sons Ltd.; *cork carpet:* Daniel Johnston; *asphalt tanking and roofs:* Val de Travers Asphalt Ltd.; *metal windows:* Williams & Williams Ltd.; *service lift:* G. Brady & Co. Ltd.; *sanitary fittings:* J. & R. Howie Ltd.; *facing bricks:* Procter & Lavender Ltd.; *cellar flaps:* Haywards Ltd.; *furnishings:* Daniel Johnston; *planting:* S. Hopkins; *painted inn sign:* Norman G. Barber.

2

3
4

5

1 and 2, the public bar. Seating is arranged as a series of deep alcoves along the window wall to obtain an air of intimacy. 3 and 4, the mixed smoking room towards the servery and the glazed internal garden court. 5, the men's smoking room

State-Managed Pub, Carlisle

Current Exhibitions

Furniture at the Building Centre

THE CRAFTSMEN FURNITURE MAKERS ASSOCIATION is currently holding an exhibition of the work of its members and others at the Building Centre. It is the first exhibition to be held by this association and it will continue at Store-street, WC1, until October 7.

This association has been formed for the benefit of the small furniture manufacturer. On a statistical basis there are many such small firms and there is a lot to be said for an organisation that will help them. These firms might well be the basis of large firms in the future and they have the merit in their present form of being able to produce a quality of work that most people cannot afford, and therefore cannot be produced in quantity, or to produce work for special requirements that again cannot be produced in quantity. Whereas a large producing unit would have to retool to change its production design, the smaller unit should be able to do such jobs, and one might expect that such an exhibition by such an organisation would present new ideas in design that could form the trend for the mass producer. However, this is not so, but it must be remembered that this is the first exhibition.

Although the display is lacking in design it is certainly not lacking in skill. And since these firms are offering this special service it is quite valid that this should be so. Of examples based on older designs there is an interesting litany desk by R. H. Fyson, a chest of drawers by Edward Baley, a faldstool by H. and K. Mabbitt that are worth mentioning.

The work designed for the present day has a slight bias towards the eccentric. However, there are several pieces of note and perhaps the most interesting is the rocking chair by David Rutherford in birch ply. With a slight refinement of the forms used this chair would be superb. There are some very clean designs by L. M. Furniture and a very neat design for a coffee table by Robert Townshend.

'Heating Your Home'

THIS IS THE TITLE of an exhibition open at the Design Centre until October 29. It is an exhibition of heating appliances for the home, essentially laid out for the layman, for whom also a small booklet has been produced which introduces the novice to the gentle art of house heating. The booklet is illustrated by Smilby and very well laid out. Also at the end there is a list of the cost of heating by various appliances which is very useful provided the oil oligopolies and the nationalised coal industry can sit on their prices.

The first section of the exhibition is devoted to appliances designed to heat the whole house or, as the booklet defines it, 'complete heating.' This consists of boilers using gas, oil, or solid fuel. There is a trend to cover the castings of the boiler and the controls with pressed steel vitreous enamel panels. The very good reason for this is that boilers can then be placed in the kitchen, or even the living-room, rather than in some special out of the way room or cellar. However, it would appear that the designers of these 'shells' have taken as their model the refrigerator, and at first glance it would be quite possible to mistake the one appliance for the other. Or, perhaps, it is the intention of the manufacturers to sell their appliances as a status symbol in the same way as the refrigerator? The result is that most of the designs are not quite as functional as they might be in that they are difficult to open and that movable parts are liable to damage. Similarly, the solid fuel boilers might be difficult to feed without damaging the enamel.

In the section dealing with 'partial heating' it is unfortunate that more types of appliance are not shown. For the most part this section consists of solid fuel heating stoves and grates with back boilers. There is, however, an exhibit of outstanding design, and that is the Janitor Junior domestic hot water boiler. There is, naturally, not much to be seen in the case of the grates with back boilers, but the stoves are not perhaps as aesthetically pleasing as they might be.

The exhibits in the 'local heating' section are much more varied in their techniques of the conversion and distribution of heat. There are several neat and honest solid fuel grates, as for example the grate by Sidney Flavel and Co., Ltd. Of the smaller appliances it is interesting to see the Radiant Heater RH57 by the Tilley Lamp Co., Ltd., which conforms with the new BS3300. Another point again with safety in mind is that all the appliances with possibly dangerous high temperature elements are adequately protected by guards.

PETER HOWELL

News of the Week

Local Government Pay Increases

DETAILS WERE ANNOUNCED on September 26 of salary increases for local government officers in England and Wales. The increases have been agreed upon by the national joint council for local authorities' staffs. The five administrative and professional grades, which ranged from a minimum of £610 to a maximum of £1,375, are increased to £645-£1,480. To qualify for salaries between £645 and £960 in this division, officers must have passed an examination of university intermediate standard. For salaries above £960 a qualification of degree standard is normally required.

The agreement also improves the scales for special classes, which includes engineers, surveyors and architects, from £785-£1,070 to £840-£1,145. The new scales of salaries for assistant engineers, surveyors and architects will operate pending further consideration by the joint council. The agreement also provides for additional grades to be eligible for overtime payments. The increases became effective from September 1 and the employers have accepted the settlement on the understanding that it will be firm for a substantial period. The agreement does not cover certain chief officers for whom separate negotiating machinery exists.

Southgate Flats Opening

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1

sub-contractors & suppliers:

roof truss design: Timber Development Association Ltd.; *electrical installation:* David Thompson & Sons Ltd.; *beer engines:* Gaskell & Chambers (Lancs.) Ltd.; *dog grates:* Selbourne Engineering Co. Ltd.; *inn sign:* Sunderland Structural Steel Ltd.; *illuminated sign box:* Drakard & Humble Ltd.; *ironmongery:* Alfred A. Roberts Ltd.; *lettering:* Ward & Co. (Letters) Ltd.; *precast concrete floors and roofs:* Concrete (Northern) Ltd.; *glamorock panels:* Duval Autos Ltd.; *larder vent:* Greenwoods & Airvac Ventilating Co. Ltd.; *Pyrok decorative treatment:* Pyrok Contracts Ltd.; *roof lights:* Lenscrete Ltd. and Cordar Ltd.; *mosaics:* Dennis M. Williams Ltd.; *cooling plant:* J. & E. Hall Ltd.; *plastic louvres:* Scemco; *linoleum and accotile:* Lonsdale Brick & Tile Works Ltd.; *double glazing:* Aygee Ltd.; *garage door:* Westland Engineers Ltd.; *copper roof:* L. Carter & Son Ltd.; *grilles:* Richard Crittall Marine Ltd.; *extractor fans:* Fenton Byrn & Co. Ltd.; *shelf ladders:* James Bendall & Sons Ltd.; *cork carpet:* Daniel Johnston; *asphalt tanking and roofs:* Val de Travers Asphalt Ltd.; *metal windows:* Williams & Williams Ltd.; *service lift:* G. Brady & Co. Ltd.; *sanitary fittings:* J. & R. Howie Ltd.; *facing bricks:* Procter & Lavender Ltd.; *cellar flaps:* Haywards Ltd.; *furnishings:* Daniel Johnston; *planting:* S. Hopkins; *painted inn sign:* Norman G. Barber.

2

3
4

5

1 and 2, the public bar. Seating is arranged as a series of deep alcoves along the window wall to obtain an air of intimacy. 3 and 4, the mixed smoking room towards the servery and the glazed internal garden court. 5, the men's smoking room

State-Managed Pub, Carlisle

Current Exhibitions

Furniture at the Building Centre

THE CRAFTSMEN FURNITURE MAKERS ASSOCIATION is currently holding an exhibition of the work of its members and others at the Building Centre. It is the first exhibition to be held by this association and it will continue at Store-street, WC1, until October 7.

This association has been formed for the benefit of the small furniture manufacturer. On a statistical basis there are many such small firms and there is a lot to be said for an organisation that will help them. These firms might well be the basis of large firms in the future and they have the merit in their present form of being able to produce a quality of work that most people cannot afford, and therefore cannot be produced in quantity, or to produce work for special requirements that again cannot be produced in quantity. Whereas a large producing unit would have to retool to change its production design, the smaller unit should be able to do such jobs, and one might expect that such an exhibition by such an organisation would present new ideas in design that could form the trend for the mass producer. However, this is not so, but it must be remembered that this is the first exhibition.

Although the display is lacking in design it is certainly not lacking in skill. And since these firms are offering this special service it is quite valid that this should be so. Of examples based on older designs there is an interesting litany desk by R. H. Fyson, a chest of drawers by Edward Baley, a faldstool by H. and K. Mabbitt that are worth mentioning.

The work designed for the present day has a slight bias towards the eccentric. However, there are several pieces of note and perhaps the most interesting is the rocking chair by David Rutherford in birch ply. With a slight refinement of the forms used this chair would be superb. There are some very clean designs by L. M. Furniture and a very neat design for a coffee table by Robert Townshend.

'Heating Your Home'

THIS IS THE TITLE of an exhibition open at the Design Centre until October 29. It is an exhibition of heating appliances for the home, essentially laid out for the layman, for whom also a small booklet has been produced which introduces the novice to the gentle art of house heating. The booklet is illustrated by Smilby and very well laid out. Also at the end there is a list of the cost of heating by various appliances which is very useful provided the oil oligopolies and the nationalised coal industry can sit on their prices.

The first section of the exhibition is devoted to appliances designed to heat the whole house or, as the booklet defines it, 'complete heating.' This consists of boilers using gas, oil, or solid fuel. There is a trend to cover the castings of the boiler and the controls with pressed steel vitreous enamel panels. The very good reason for this is that boilers can then be placed in the kitchen, or even the living-room, rather than in some special out of the way room or cellar. However, it would appear that the designers of these 'shells' have taken as their model the refrigerator, and at first glance it would be quite possible to mistake the one appliance for the other. Or, perhaps, it is the intention of the manufacturers to sell their appliances as a status symbol in the same way as the refrigerator? The result is that most of the designs are not quite as functional as they might be in that they are difficult to open and that movable parts are liable to damage. Similarly, the solid fuel boilers might be difficult to feed without damaging the enamel.

In the section dealing with 'partial heating' it is unfortunate that more types of appliance are not shown. For the most part this section consists of solid fuel heating stoves and grates with back boilers. There is, however, an exhibit of outstanding design, and that is the Janitor Junior domestic hot water boiler. There is, naturally, not much to be seen in the case of the grates with back boilers, but the stoves are not perhaps as aesthetically pleasing as they might be.

The exhibits in the 'local heating' section are much more varied in their techniques of the conversion and distribution of heat. There are several neat and honest solid fuel grates, as for example the grate by Sidney Flavel and Co., Ltd. Of the smaller appliances it is interesting to see the Radiant Heater RH57 by the Tilley Lamp Co., Ltd., which conforms with the new BS3300. Another point again with safety in mind is that all the appliances with possibly dangerous high temperature elements are adequately protected by guards.

PETER HOWELL

News of the Week

Local Government Pay Increases

DETAILS WERE ANNOUNCED on September 26 of salary increases for local government officers in England and Wales. The increases have been agreed upon by the national joint council for local authorities' staffs. The five administrative and professional grades, which ranged from a minimum of £610 to a maximum of £1,375, are increased to £645-£1,480. To qualify for salaries between £645 and £960 in this division, officers must have passed an examination of university intermediate standard. For salaries above £960 a qualification of degree standard is normally required.

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A Hundred Years Ago

From The Builder of Sept. 29, 1860

THE MAGNETIC TELEGRAPH COMPANY.—The facilities for sending messages by telegraph appear to be gradually approaching the conveniences of our postal system. The Magnetic Telegraph Company are now issuing small adhesive stamps for franking messages throughout their lines in the United Kingdom. The principle is precisely similar to the postage stamp system. A message can be written wherever convenient, and, after affixing the necessary stamp, it can be sent either by post or messenger to the nearest magnetic telegraph station, and thence forwarded to its destination.

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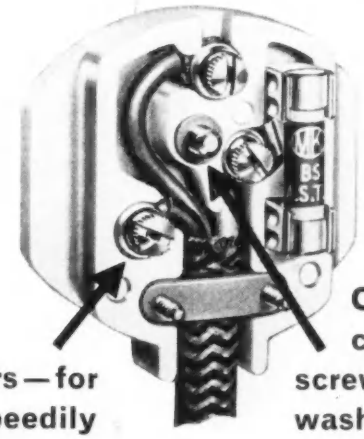

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FRIDAY, OCTOBER 7

ART WORKERS' GUILD.—'The Structure and Aesthetics of Reinforced Concrete,' by Mr. A. J. Harris, 6 Queen-sq., Bloomsbury, WC1. 7 p.m.

INSTITUTE OF BUILDERS.—Inaugural meeting of the Midlands Branch, Mr. G. O. Swayne in the chair. Grand Hotel, Birmingham. 6.30 p.m.

A Hundred Years Ago

From The Builder of Sept. 29, 1860

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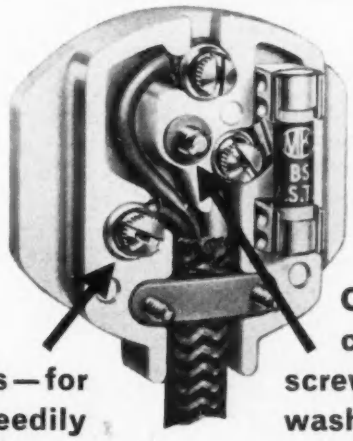

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More Everyday Things

BY ARTHUR W. KENYON, CBE, FRIBA

9. Mews Dwellings

'MEWS PROPERTY WANTED—suitable for conversion.' These little properties, built as stabling for horses, and crude dwellings for coachmen and other domestic staff, are now among the most sought-after in London. No attempt at architecture can be seen in the original buildings; views are mostly of dustbins, milk bottles and parked cars; staircases are narrow and inconvenient, daylight often has to be contrived. Yet, offered the choice of a mews dwelling or a modern flat in a large block, 75 per cent would choose the mews.

Those who have money to spend can transform their one-time coach house into a home of individual character and bijou charm. The flower-boxes, the bay trees, the new windows and doors, the old carriage lamps and, above all, the rainbow colours of these converted properties which can be found throughout central London, raise far more exclamations of admiration and delight than the most de luxe of luxury blocks. Inside, the ingeniously contrived living arrangements seem to suggest far greater possibilities of comfort and home than ten-storey flats planned with every ultra-modern device.

The sense of the Romantic dies hard in us home-loving Britishers and I very much doubt whether we shall ever really become a nation of flat-dwellers in the continental pattern. Flats in large blocks may be all right for a few sophisticated town dwellers (who often have cottages in the country as well), and a necessity for working-class families in crowded areas, but for the majority of our countryfolk home is a small dwelling with

its own front door, and I think the popularity of the mews properties with their expensive conversions confirms this.

Since there is such demand for these places, should we not make more attempt to recreate their mood and atmosphere? Is there not a modern version of the mews waiting for some ingenious architect to design? I do not think I see quite the quality of the mews house in even the best of our new housing developments. But then the mews house as we now know it is itself a new housing development, or is it just a temporary expedient doomed to disappear altogether from the scene as leases expire? If so, perhaps someone should start making a record of them right now, so that future historians of domestic architecture in England may not overlook one of the more delightful aspects of life in crowded mid-twentieth century London.

Out-of-date Buildings

Mr. A. G. Sheppard Fidler on 'Semi-permanent Buildings'

MR. A. G. SHEPPARD FIDLER, MA, FRIBA, AMTPI, city architect, Birmingham, told an educational conference at Birmingham on September 24 that in this highly scientific age our needs for accommodation were changing so rapidly and buildings were becoming out-dated so quickly that, as a nation, we would have to consider building on a semi-permanent basis. New buildings, he said, should be made less solid and should have a shorter life; in many cases we were wasting money by building too solidly and too expensively. Mr. Sheppard Fidler was addressing the annual conference of the Association of Teachers of Domestic Subjects.

He continued: 'We would not wish to build short-lived cathedrals or prestige buildings of that kind, but there is a very great deal to be said for pressing on much further with standardisation and prefabrication, so that enormous benefits which can come from these may be spread over a wide variety of buildings.' The speaker thought planners should be 'more experimental with new method and techniques.'

Turning to the housing situation in Birmingham, Mr. Sheppard Fidler revealed that one in every six was unfit, although a leading rôle had been taken in slum clearance and redevelopment.

Redeveloping Bomb Sites

Development Held Up Pending Site Appreciation

THE problem of Hastings' bombed sites, still almost as great a blot on the landscape as ever they were, has again been brought to the fore by a demand by the vice-chairman of the town planning committee, CLLR. E. P. NYE, for 'resolute action' by the town council.

'My information is that, although every site has been acquired and outline planning permission obtained, there is hardly a site where the developer has any idea of putting the work in hand,' he states. 'Most of the sites have been acquired as an investment and are being held for site value appreciation,' he believes.

Councillor Nye says he thinks it time that the council proceeds resolutely with the policy previously agreed upon which was to apply for compulsory purchase of all sites and to complete this unless development commences within twelve months.

The town planning committee will now bring the matter before the Council. In expressing its concern over the delay in redeveloping the bombed and derelict sites, it urges that such sites should be dealt with 'resolutely and progressively' according to the circumstances attending each.

Obituary

Charles Woodward, ARIBA

MR. CHARLES WOODWARD, ARIBA, whose death on August 21 we regret to record, held for many years a position almost unique as a link between the architectural and legal professions. After qualifying as ARIBA in 1908, he and his brother Frank worked with the late William Woodward in Great James-street, Bedford-row. His leanings were always towards the law (he once confided to the present writer that his ambitions lay in the direction of the Bar) and a wide experience of building law and arbitration procedure, allied to a genuine desire to assist architects, particularly younger men, who found themselves involved in one or another of the legal traps with which architectural practice is beset, had for many years given him a special place in architectural circles. Not a few architects now distinguished owe him a debt they would be glad to acknowledge for wise and expert advice, freely given, in professional difficulties.

For the past 15 years Mr. Woodward had been responsible for the useful 'Practice Notes' which have been a feature of the 'RIBA Journal.' He was a loyal member of the Architectural Association.

H. A. Blunt, FRIBA

THE DEATH HAS OCCURRED of Mr. Harry Arthur Blunt, FRIBA, of Quinton, Birmingham. He was 59.

W. W. Sapcote, FIOB

MR. WILLIAM WILKINSON SAPCOTE, of Moseley, Birmingham, whose death took place on September 20, was a former president of the Midland Federation of Building Trades Employers. He was 69. Mr. Sapcote was chairman and managing director of William Sapcote and Sons Ltd., Camden-street, Birmingham, one of the oldest firms of builders in the Midlands. He was also chairman of Walter Gladding and Co., Ltd., London, and a director of the Builders' Accident Insurance Ltd.

The Balch-Essex Prize

THE ROYAL INSTITUTION OF CHARTERED SURVEYORS have informed 'The Builder' that the closing date for the receipt of papers submitted for the Balch-Essex Prize (the issue of September 9), to be awarded in January, is November 30, and not as previously stated.

Central Area Redevelopment

Sir William Holford on 'A Disastrous State of Affairs'

Sir William Holford, the President of the RIBA, addressing the annual conference of the Association of Municipal Corporations at Eastbourne on September 21, described some preliminary recommendations made recently by the RIBA to local authorities with the object of overcoming what he described as 'a disastrous state of affairs' in the redevelopment of the commercial centres of cities. He gave a number of striking illustrations of the waste of time, money and professional talent that is taking place because the duty of the public authority and the legitimate business of private developers are becoming badly mixed up. A report of his remarks follows.

YOU WILL NOT BE SURPRISED (said Sir William) to learn that this paper deals with architecture, in the broadest sense of that term which embraces the whole physical design of town and village. It is also going to deal with the means of achieving architecture, which I would consider to be one of the principal functions of municipal Corporations during the 1960's and beyond.

'Did you ever expect a Corporation to have a conscience?' said Lord Thurlow a hundred and fifty years ago . . . when it has no soul to be damned and no body to be kicked?' But times are changing. Those of us who believe in evolution recognise that one of the great hopes of progress is the growth of soul in the body social or politic. And as to kicking, I rather think that Parliamentary debates, public inquiries, ministerial pronouncements, and the proposals of local government boundary commissions, are all providing excellent practice in this particular form of footwork. The individual Councillor, or the progressive group, who advocate long-term improvements which at present can only be financed by an increase in the rates, are only too often the victims of popular assault; they are kicked out by the ratepayers.

Architecture's 'Battle for Life'

The problem of re-building is a challenging and a serious one, both for you as local government, and for us as architects. Indeed, in occasional dark moments of despair, I wonder whether architecture itself will survive the battle for its life which is being waged in this generation and the next. I do not refer to building, nor to 'building development,' as it is called these days, but to architecture that lifts the heart and delights the eye, that appreciates the better qualities of its own age—including its advances in scientific thought—and is therefore likely to be remembered, and preserved, by future ages. This kind of architecture is too seldom achieved; too seldom wanted.

During the last ten years a good deal of initiative has shifted from local authorities to private enterprise—not so much to the big landlord and the owner-occupier, but to the 'developer' and the 'promoter.' War-damaged and slum clearance areas, and the anticipation of urban renewal in the statutory development plans prepared under the Town and Country Planning Act, now have a competitor in the redevelopment bids made for commercial property in key positions. Their objective is the same as that of the 'take-over bids' familiar to the Stock Exchange, namely that the bidder believes he can make more efficient and more profitable use of the assets of a site, or of a company.

Local authorities, of course, have other sites and areas—sometimes whole sectors of towns—that badly need redevelopment, and to which the developer is much less likely to be attracted. They share with the Government and other public authorities, a duty towards all these 'special' or 'depressed' areas; and their resources are not sufficient to cover them all as well as the highly speculative key sites in the centre. So it is obvious that more and more of these central areas will be the subject of speculation or investment by private enterprise, with its greater freedom, its know-how, and its capacity to attract financial capital.

Speculation and Architecture

Now, speculation and architecture have often gone hand in hand. Grosvenor and Cavendish-squares in London, for example, and the development of what is now the central area of Bath by John Wood, father and son, were almost entirely speculative. The architect, in this case, appealed with his design directly to the taste of potential clients. The economics of the scheme was a reflection of its design; if the latter was barren the former was likely to be a failure. For prestige reasons also the great landowners commissioned good architects—as big American companies are doing today—to translate profits into tangible and visible evidence of their success and into a long-term investment which, in its turn, would become profitable. On a large scale this is what was done in the New Towns created by the Act of 1946. And what is being done at Stevenage could be repeated and even improved upon in Cumbernauld and in the newest additions to the Government's list.

Speculative development *without* benefit of architecture, is likely to result in a cheapening of the whole quality of urban life, whether it takes place on a suburban housing estate or in Piccadilly. This is what led the Council of the Royal Institute of British Architects to take the initiative and to invite all local authorities considering the redevelopment of their central areas by private developers, to discuss the problem with them. At the end of July I sent a letter to local authorities, enclosing a copy of the Council's statement on 'Competition by Tender,' and saying that we hoped to discuss the details with the appropriate local authority associations.

This statement has since been described in the Press as a 'protest'; but it is really an invitation. We know, from the approaches made by a considerable number of local authorities already, that they are just as concerned about the problem as we are. This statement provides an outline of the principles which we think should be followed, and offers to modify the means of carrying them out if experience shows this to be necessary. At the back of it are two propositions which we regard as fundamental. The first is that in matters of circulation, land-use and public enjoyment in the central area of a town, the local authority is the proper client. The second is that architecture can only be produced by those who have been trained in design and who give their whole time to it.

May I suggest that this problem is too big to be dealt with in terms of personalities or particular cases. It is perfectly true that all architects are not great architects; just as all chairmen of committees are not masters of their craft. The useful point is that there are good architects and there are excellent chairmen. The architectural profession contains artists who are not first-class men of business, and business men who do not always succeed in being artists. But because they are a profession, and not a uniform consignment of branded goods, they maintain a high standard of education, they recognise that more and more skills and specialisms have to be co-ordinated in the building process, and they understand—individually and collectively—that art and science and economics all have a place in the creation and the rebuilding of housing estates and shopping centres, universities and cities.

Customer 'Not Always Right'

Our clients are also not always perfect. The customer is not always right. You probably recall the famous remark of an exasperated but able chairman when his meeting could not arrive at a decision on principle and broke down on endless matters of detail. 'Gentlemen,' he said, 'do you know what a CAMEL is? It is a horse designed by a committee!' Again, the important point is that democratic organisation is perfectly capable of finding effective methods of using architects and artists—as the private patron did in the past—of recognising and benefiting from the results of scientific thought, and of taking a balanced view of investment in the public interest. But this is far from being automatic; it takes time and experience and administrative skill to produce the highest common factor from councils and committees.

This being so, I do not need to underline the RIBA's reasons any further for seeking, in company with some of its sister professions, an audience among the local authority associations.

In the matter of Competition by Tender we have made [see 'The Builder' of September 16, p. 520] some preliminary recommendations to over-

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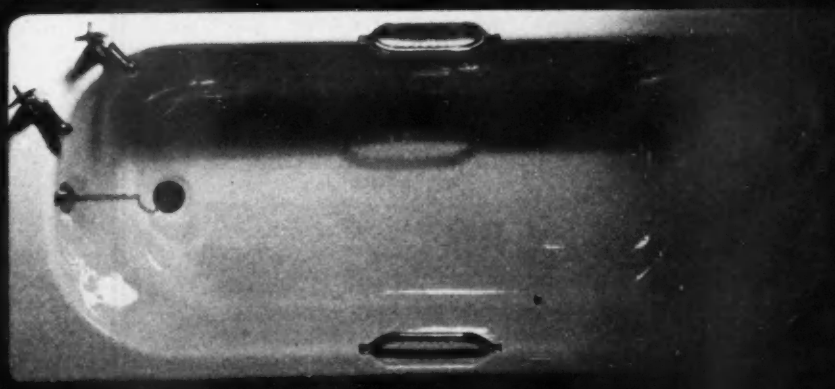

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come what is fast becoming—from our professional standpoint — a disastrous state of affairs. We have suggested that a much clearer distinction should be drawn between the duty of the public authority and the legitimate business of private development. We acknowledge that each has its own initiative, experience and responsibilities; but we think they are becoming badly mixed up. For both small and large projects we therefore recommend means of separating the process of commercial completion from the process of securing the design or plan best suited to the public's needs, interests and convenience.

For small developments we have recommended that:

> 'where an RIBA competition could not be expected to attract sufficient entries to justify the cost, the local authority should appoint one architect for the entire work. He would work in close collaboration with the planning authority in preparing his design. Developers would then be invited to put in competitive bids on the basis of his design, but would not be permitted to employ their own architects. While this might deter some developers, the RIBA is satisfied from consultations with developers and their architects that a sufficient number of developers would be prepared to tender on this basis.'

For larger developments we have recommended alternatives depending on whether there is an architectural competition or not. Where there is no architectural competition, either open or limited to selected firms, we recommend that:

> '. . . an architect—either the local authority's chief architect or a consultant in private practice—should be appointed to draw up a three-dimensional master scheme, sufficiently flexible to take account of the developer's requirements. It should normally be a condition of his appointment that the consultant would work with advisers expert in planning, finance and/or commerce, and in close collaboration with the planning authority. Competitive bids would then be obtained from developers, the work being executed by the winning developer's own architect. The consultant would be debarred from assisting any of the competing developers in any way.'

Where there is an architectural competition, we recommend that:

> (a) The local authority would promote an architectural competition for the development of the site, under RIBA competition regulations. In accordance with these regulations the assessor, who would select the winning design, would be an architect, or, if there was more than one assessor, a majority would be architects. Competitive bids would be invited from developers for the execution of the winning design, the successful developer being required to appoint the winner of the architectural competition to execute the work on the basis of normal architect-client relationship.
>
> (b) Alternatively, the winning architect would be appointed the architect for buildings to be erected by the local authority, and consultant architect for the remainder of the development, the successful developer employing their own architects as executive architects for their own buildings.'

Now it is a feature of most architectural competitions, and it should be a feature of all outline schemes prepared for tender by developers in competition on a financial basis, that an estimate of cost or quality of building should be included. It would seem fair and reasonable for authorities, on the advice of their consultants (including the quantity surveyor) to give the approximate cost per cubic foot which is anticipated and aimed at. Developers and their own advisers may suggest variations on this, but at least it provides an index of comparability between the project itself and other works whose final costs have been analysed, and also between one developer's scheme and another's.

One further safeguard I would like to mention, which is not referred to in the RIBA statement. Some areas, as we know from recent history, are very much in the public eye. It may happen in future that a local authority will prepare (or have prepared) for it an outline plan in three dimensions and a descriptive programme of requirements and that the work will be designed in detail and executed by the developer's architect and other technical advisers.

In schemes of this importance, and especially where a great deal of preparation and assistance has been contributed by the local and the planning authorities, it is surely not unreasonable for them to require from the developer that his architect should be acceptable to them. It would be a disaster if everything was of a high standard except the final appearance of the completed project. And for this the designer must be responsible, on the drawing-board and on the site.

Some Examples of Muddle

You may think these recommendations and safeguards far too elaborate, or even one-sided, for the process of rebuilding the inner commercial sectors of our cities. So I should like to conclude with some examples of the muddles that are now being made and of the waste of professional ability in a field where it is none too plentiful at the present time.

1. Corporation A asked an experienced property company to submit a tender for their central entertainment and shopping area, together with a design. The company produced a scheme costing £600,000 with car parking on upper floors. Another developer, less experienced, submitted a scheme with underground parking, for a much greater cost, but including an additional building of what is nowadays called 'an unremunerative kind'—you will all recognise the technique: it might be a public library, or a theatre or a planetarium. The Council of the Corporation thought they were getting something attractive for nothing and awarded the second developer a draft contract. He then approached the first developer (having obviously some serious doubts about his capacity to carry out his obligations) and offered to sell the contract for a very considerable premium. Please note that Corporation A had at least two schemes to choose from without appointing a disinterested assessor, or paying any premiums, or holding a competition.

The rebuilding of Plymouth on the basis of the plan prepared by the late Sir Patrick Abercrombie and Mr. J. Paton Watson is progressing steadily. This recent picture shows the Royal Parade with, on the left, St. Andrew's Church, the Guildhall, and the new Civic Centre, and, right, part of the new shopping centre

2. Corporation B, on the other hand, took immense trouble to prepare a basic scheme, and formed an admirable team of their officers, with external experts, to work out valuations and a prospectus. A dozen development companies were attracted to submit tenders and designs together; and they were told that the council would adjudicate on the results. The council were delighted to find that the very glamorous model prepared by one developer's architect accompanied a bid which offered the highest immediate ground rent for the property. They gave the Press to understand that they favoured this scheme; but after a public inquiry had been held, the Minister rejected it, both comprehensively and in detail; and Corporation B is back where it was 6 years ago. Moreover, a public inquiry costing some thousands of pounds has achieved nothing; and each developer has expended between £800 and £1,200 for no result whatsoever.

Abortive Schemes

3. Corporation C has had an even more important, war-damaged site to rebuild, as a shopping centre, on a big road traffic junction. After the most careful preparation of particulars, and the fairest possible briefing of all interested parties, tenders were invited. But no assessor was appointed, no fees paid, and no rules laid down for the adjudication of bids. Although, in this case, a result was achieved—in that a contract has been let—it was achieved at the cost of no less than 35 unsuccessful schemes, with 35 expert valuations, and 35 different ways of developing the site.

You may say that all speculation carries a risk, and that no developer was pressed to compete. But how much greater would the value of competition be, if the rules were known, if a proper assessment were published, and if the developers were enabled to profit by their experience.

4. Corporation D did not propose to invite competitive bids at all. They asked one development company only to prepare a scheme and negotiate a rent. After a great deal of technical and design work had been done, the Corporation asked for amendments and finally expressed themselves as satisfied that the site could be suitably and economically developed. Without any recognition for all this preliminary work Corporation D then proceeded to put the site to tender. The company originally approached failed to secure the site.

In a similar case insult was added to injury by the Corporation passing on to another developer some of the ideas and calculations submitted by the first development company, in neither of which items, of course, is there any copyright. (If actual designs or signed drawings had been copied, the Corporation could have been sued.)

5. Corporation E, the last case I shall quote, is typical of a number of others of which we have details. They gave a contract to a selected developer who hawked it round a number of development companies without success for about two years. He eventually found that he could get no one to take it on, nor to give him a premium for its sale. So he gave it back to the Corporation, who then obtained a number of new schemes on a revised basis, and finally gave the site to another developer who again took a premium but did not develop the site. A third round has resulted in what looks like a genuine development, but it will be to a higher density than originally proposed. The cost in abortive work is known to have been at least £80,000 and may have been much more. The developers and their professional advisers can only guess at the reasons which weighed with the Council in coming to a decision.

It does seem from these examples (concluded Sir William) that some of the professional skill used or abused in this very imperfect system of competition by tender, might be put directly at the service of the communities who badly need imaginative redevelopment, combined with traffic improvements, in their central areas. In the final result, quality counts; and for the citizens themselves, nothing is cheap if they don't really want it.

Utilising the Sun's Rays for Heating

A Solar-Warmed Swimming Pool

SOLAR ENERGY is being used to heat a new public salt-water swimming pool recently installed at 'Ye Olde Felbridge Hotel,' situated about 30 miles south of London on the A22 London-Eastbourne road. The water is warmed by a solar energy heater, a bold project conceived by Mr. Harry Gatward, the owner of the hotel, in co-operation with ICI Metals Division, who were both confident that even in England the sun's radiant heat energy could be effectively utilised.

As the boost in temperature required is quite small (15°-20° Fahrenheit) the solar heater operates at a very high collection efficiency and readily keeps the 50,000 gal. of water in the pool at between 65° and 75° Fahrenheit during the summer months. The size of the unit is such that these temperatures can be maintained even when there is intermittent sunshine as so often happens in this country. The heater has been placed at ground level and is tilted towards the south at the most advantageous angle for maximum absorption of solar energy during the period April to October.

Panels of copper strip with integral parallel tubeways are used for the collector plate, covering an area of about 530 sq. ft. and contained within a structure 34 ft. long by 18 ft. high. The panels, painted black to increase absorption efficiency, are backed by insulation. They are covered in front with glass-plate which, while reducing incident radiation slightly, prevents re-radiation from the collector plate of energy in the infra-red region, thereby acting as a kind of radiation non-return valve and increasing collection efficiency. Heat losses due to convection currents and breezes are also eliminated.

In operation, the radiant energy from the sun heats the copper panels and the pool water, circulated by a small electric pump through the tubeways in the material, takes up the heat energy. The design of the unit is such that the space beneath the panels is used to house the circulating pump, water treatment and filtering equipment, whilst it may conveniently be used for the storage of garden furniture and other equipment.

The initial cost of a unit of this type compares very favourably with alternative heating systems, and the running costs are negligible. The panels of copper strip are manufactured by ICI under the patent name of 'Strip-in-Tube.'

View of the swimming pool showing (centre) the solar energy heater

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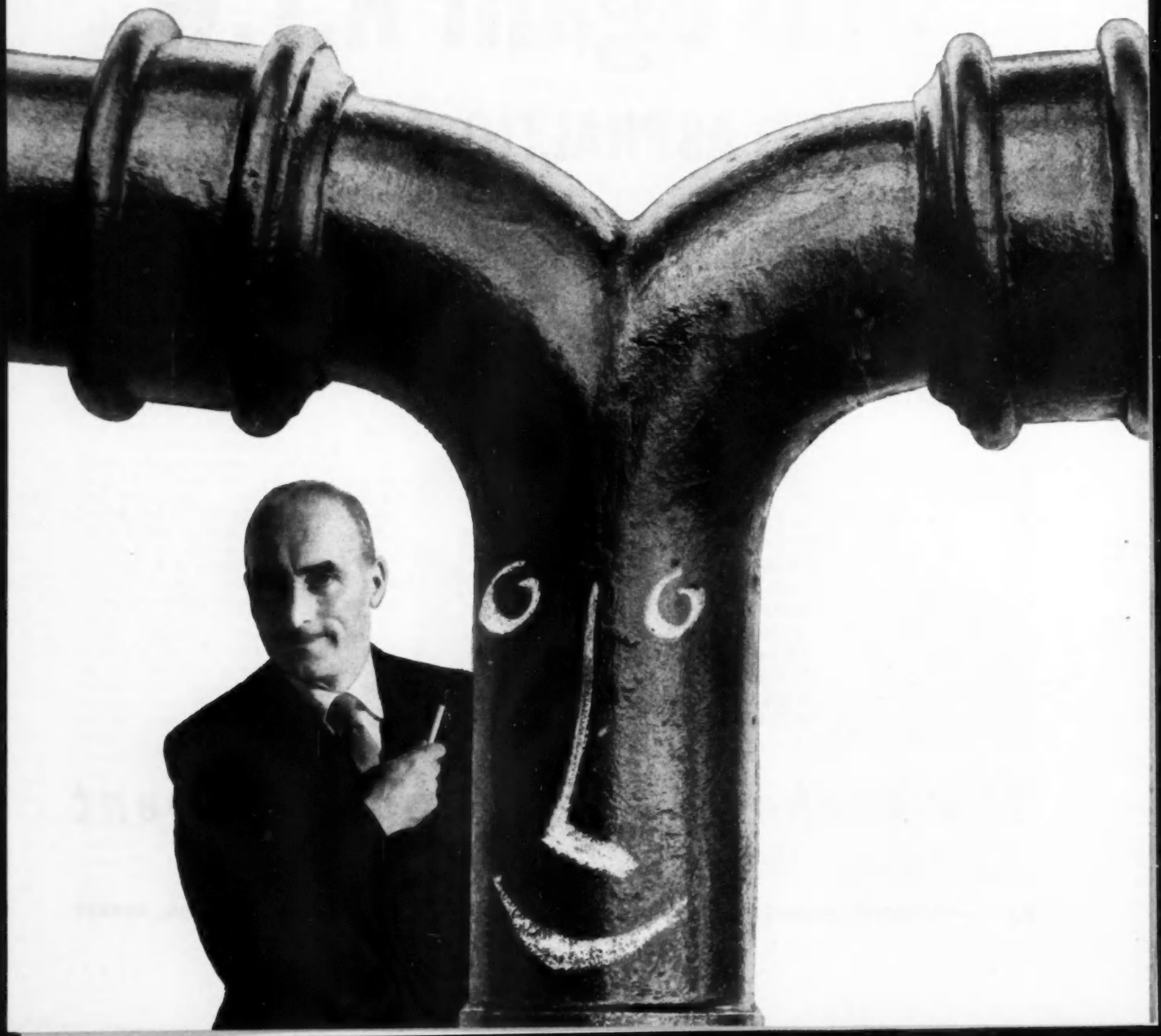

House Improvement by Grant

Minister on Encouraging Upward Trend

OPENING AN EXHIBITION to inaugurate a 'Better Homes Week' at Leeds on September 19, MR. HENRY BROOKE, Minister of Housing and Local Government, spoke of the striking increase in house improvement work carried out with the aid of grants. Four times as many grants were being made now as in 1958, he said, and the improvement of whole areas and districts has begun.

'Much of this,' continued the Minister, 'is directly due to the introduction of standard grants, but the changes in the 1959 Act have also stimulated a big increase in work done with the benefit of discretionary grants.'

Quoting figures for all grant-aided improvements, Mr. Brooke said that up to the end of 1958 the number of grants made had remained at about 35,000 a year and had failed to increase beyond that. The new provisions came into force in mid-1959, and in that year the number rose to nearly 80,000. The figure for 1960 was expected to reach 135,000; an encouraging trend towards the ¼m. mark, which was a more desirable level and one which the Minister wanted to see achieved.

There was, in Mr. Brooke's view, an immense amount of improvement work still to be done. There were up to 3m. structurally sound houses which in varying degrees needed improvement and were capable of it. Meeting this major challenge was one of the great housing tasks over the next ten years.

Pointing out that in Leeds the Council had set out to secure the improvement of whole streets and areas by defining 'improvement' and 'conversion' areas in which a concentrated effort of modernisation is then made, the Minister said: 'The aim has been not only to get the houses modernised and made good to live in, but to give a new look and tone to the whole neighbourhood.

'I am sure that the idea of getting improvements and conversions carried out on an area basis is sound. I would like all housing authorities in towns and cities to turn their mind to it. It offers, I believe, a field of useful collaboration between local authorities and owners. For improvement and conversion by areas is not only good housing policy, it is also good economics. The first step is to define the areas which it is desired to improve. At this point the local authority can usefully take the initiative in putting forward proposals.

'Then there ought to be consultation with all owners—owner occupiers and landlords alike—to try and get their co-operation in securing the improvement of every house in the area. The object is to get agreement on the formulating and carrying out of improvement schemes by the owners in convenient blocks of houses.

'The local authority can help in various ways, and should. They can give technical assistance on ways and means of carrying out improvement and conversion work; they can make known their willingness to give assistance in the form of grants and loans towards the cost of such work; and where owners are unable or unwilling to carry out improvements, they can offer to make advances to help other owners who are willing to buy the houses and improve them as part of a concerted scheme. Alternatively, the authority can offer to purchase by agreement themselves, and so participate directly in the carrying out of the scheme.

'I believe', concluded Mr. Brooke, 'that many more owners will respond to the call for improvement and conversion of their houses if they are given a strong and helpful lead by the local authority.'

Building Land

FMB Vice-President on 'Frightening Scarcity'

'FOR A LONG TIME NOW this Federation has been warning the country of the frightening scarcity of suitable building land. Our warnings were dismissed or ignored until a short time ago, when at last the Government and the general public woke up to the seriousness of the position. This amounts to a crisis in certain parts of the country where there is every likelihood that unless land is made available there will be no space for any more houses after about 2 years' time.' MR. K. L. G. WARNE, vice-president of the Federation of Master Builders, made this comment to North Western regional members in Llandudno on September 24. On the South coast, he added, many builders would run out of available land by next year, while it was reported that a large number of house builders registered with the National House-Builders Registration Council had stated that they would be without land by 1962.

'This is no temporary bottleneck,' Mr. Warne continued. 'Despite all the representations made the Minister of Housing has refused to start any inquiry into this problem. But in a recent circular to local authorities he appears to be more alive to the situation and we must welcome any move along these lines. Let us hope that planning authorities will now encourage more conversions of older properties, will re-develop older areas of their towns at higher densities. More than this, we hope that a great deal will be done to see that land is made available that is, at the present time, awaiting some form of development, and even, in some instances, held in case development should be required.'

Both the builder and the public were having to pay through the nose for the dribbles of land that did come on to the market. Moreover, the people who benefited, apart from the land owners, were those who were purely land speculators, who profited by their wide knowledge of the complexities of the planning law. It was unfortunate that builders, who had co-operated loyally with planning authorities all over the country, should be held responsible for much of this speculation, when this was very definitely untrue. 'Many authorities are years behind in their proposals for future development,' Mr. Warne declared, 'and comply with only the bare minimum of the requirements of the law in making those proposals public. This provides a rich field for the land speculator.

'Why cannot there be more co-operation between planners and builders? We should all get around the table and discuss not where we cannot build but where we can. And instead of some local authorities fiercely competing with private builders—even to the extent of themselves building houses for sale in order to keep their departments employed—it would be in the public interest were they rather to seek the builders' co-operation. In today's circumstances the "us" and "them" mentality is stupid.'

Books Received

*** Books noted in these columns may be obtained on application to the Book Dept., 'The Builder,' 4 Catherine-street, Aldwych, WC2. Cash (to include postage on books to the value of 10s., 9d.; over 10s., 1s. 6d.) should accompany the order.*

INDUSTRIAL ARCHITECTURE. By James F. Munce. (London: Interscience Publishers Ltd.) Price 111s.

EARLY ARCHITECTURE IN BRITAIN. By H. & R. Leacroft. (London: Methuen & Co., Ltd.) Price 10s. 6d.

CAMBRIDGE DISCOVERED. By Bryan Little. (Cambridge: W. Heffer & Sons Ltd.) Price 15s.

DEAR DEAD DAYS. By Charles Addams. (London: Books for Pleasure Ltd.) Price 18s.

ARCHITECTURAL DRAUGHTSMANSHIP. By A. Stanley Barnes and P. E. Cleator. (London: Leonard Hill (Books) Ltd.) Price 25s.

LONDON: THE UNIQUE CITY. By Steen Eiler Rasmussen. (Middlesex: Penguin Books, Ltd.) Price 5s.

REINFORCED CONCRETE PILING AND PILED STRUCTURES. By F. E. Wentworth-Sheilds, W. S. Gray and H. W. Evans. (London: Concrete Publications Ltd.) Price 18s.

National Fire Prevention Week

THERE IS to be a National Fire Prevention week in 1961. It will run from October 30 to November 4 and will be organised jointly by the Fire Protection Association and the Royal Society for the Prevention of Accidents. On the average some 600 people die by fire every year; the cost of fire in 1959 reached a total of £44m. and at the moment there is every indication that 1960 will be equally as bad.

Failure to Protect a Hoist

Cambridge Builders Fined

MRS. C. M. JOHN, a district inspector of factories told Cambridge City Magistrates' Court on September 14 that because of the increase of building-site accidents, strict compliance with the regulations was being enforced. Mrs. John was giving evidence against Messrs. John Brignell and Co., a firm of local builders, when they were prosecuted on three charges concerning failure to observe the safety regulations.

Messrs. Brignell's pleaded guilty to all three offences: that they failed to enclose the hoistway of a hoist which their workmen were using in building a house in St. Albans-road on the Arbury Estate on July 7; that they failed to fence the revolving shaft of the hoist motor on the same occasion; and that they failed to provide a toe-board to a working platform on the scaffolding some distance above the ground.

The hoistway should have been substantially fenced, said Mrs. John, to prevent anyone falling down it from an upper level, and to prevent anyone being struck by any moving part of the hoist while walking underneath. The purpose of fencing the revolving shaft of the motor was to prevent anyone's clothes becoming wrapped round it; the provision of a toe-board on an upper level platform was particularly important to prevent the fall of material and tools.

Two inspectors visited the site in question on July 7—the company were building a detached house at the time—and noticed that these three provisions of the regulations were being contravened. The defendants could not have been unaware of the requirements because letters were sent to them in respect of other sites on December 12, 1957, and on April 6, 1960; and as to enclosing the hoist, letters were sent on six dates from February 8, 1957, to April 6, 1960.

MR. W. G. WRIGHT, for Brignell's, said the regulations were intended for the safety of employees and every effort was made by the firm to ensure that they were observed. At the same time it was impossible on each and every occasion to give full supervision to the work which was being done, and occasionally the workpeople themselves were remiss in observing what they knew to be regulations for their own safety.

On this occasion, with regard to the complaint concerning the fencing of the hoist, and the toe-boards required for the scaffolding, the scaffolder had been called away from the site and had left the work unfinished. The third matter, the guarding of the revolving crankshaft, was not perhaps a matter which was likely to have caused any very serious injury; it was quite obvious when the machine was working by its noise, and anyone working on the site would be familiar with it.

There should have been a guard and there was originally one, but is had disappeared. The loss had not been reported by any of the workpeople employed by the firm and consequently was not observed until official notice had been taken of it. In 21 years of business, Brignell's had never experienced any serious accident as a result of anything of the nature mentioned in these complaints.

MR. P. SENNITT, chairman of the Magistrates, said they took a very serious view of the case. The company were fined £100 on the first charge, £5 on the second, and £10 on the third, and he added that although they had been given adequate warning they had still failed to comply with the regulations.

Industrial Building

Lowest Area of Completions Since 1953

THE FIGURES of industrial building approved from April 1, when the Local Employment Act came into force, relate to all schemes for which Industrial Development Certificates have been issued. They are therefore no longer strictly comparable to those for earlier periods which were limited to schemes of over 5,000 sq. ft. in the manufacturing industries. On this new basis Industrial Development Certificates issued in the 2nd quarter of 1960 totalled 23.8m. sq. ft.

In the new figures issued by the Board of Trade it is estimated that 9.4m. sq. ft. of industrial building was started in the fourth quarter of 1959 bringing the total for that year to 42.4m. sq. ft., slightly above those for the two previous years. The area of 8.2m. sq. ft. estimated to have been completed in the fourth quarter of 1959 brought the annual total to 35.2m. sq. ft., the lowest since 1953.

INDUSTRIAL BUILDING IN GREAT BRITAIN (1)

	Approved in Period		Started in Period		Completed in Period	
	Number	Area (Million sq. ft.)	Number	Area (Million sq. ft.)	Number	Area (Million sq. ft.)
1945–53 (2)	13,695	335·1	9,936	236·2	8,330	179·7
1954	2,701	70·9	2,157	46·5	1,744	39·2
1955	3,316	91·5	2,538	65·8	2,123	41·6
1956	2,467	71·1	2,095	55·5	2,328	49·0
1957	2,416	63·5	1,895	41·1	2,108	52·9
1958	2,093	45·7	1,699	40·0	1,983	49·5
1959	2,457	58·4	1,928	42·4	1,622	35·2
1958—January–March	578	11·7	412	8·7	522	12·7
April–June	501	10·7	472	11·6	465	12·2
July–September	504	12·3	440	10·5	475	10·9
October–December ...	510	11·0	375	10·1	521	13·7
1959—January–March	527	15·8	407	10·3	365	7·6
April–June	620	14·3	541	12·0	427	9·5
July–September (3) ...	611	13·4	490	10·7	420	10·0
October–December (3)	699	15·0	490	9·4	410	8·2
1960—January–March	996	34·5	—	—	—	—
April–June	1,020	23·8	—	—	—	—

Notes :
(1) Up to March 31, 1960, the table relates to new buildings and extensions of over 5,000 sq. ft. in manufacturing industry and from April 1, 1960, to all schemes approved irrespective of size or industry concerned. The definition of manufacturing is according to the Standard Industrial Classification ; the 1958 revised version was followed for manufacturing industry building approved from January 1, 1959, to March 31, 1960, and is now in use for all industries.
(2) Schemes for replacement of buildings destroyed by fire or enemy action are excluded prior to July, 1958.
(3) For the third and fourth quarters of 1959 the total number and area started and completed are partly estimated.

ANALYSIS BY STANDARD REGIONS (1) (2)

	Approved January 1, 1945, to June 30, 1960		Under Construction at December 30, 1959		Completed January 1, 1945, to December 30, 1959	
	Number	Million sq. ft.	Number	Million sq. ft	Number	Million sq. ft.
Great Britain	31,161	794·4	2,010 (3)	81·6 (3)	20,238 (3)	447·6 (3)
Northern	1,620	56·8	64	6·2	1,259	39·8
East and West Ridings... ...	3,156	64·5	185	6·8	2,107	35·2
North Midland	2,438	52·7	145	5·2	1,684	33·0
Eastern	2,505	75·0	200	11·7	1,558	37·3
London and South Eastern ...	5,618	125·2	432	12·5	3,005	59·1
Southern	1,740	45·7	160	4·8	1,006	21·8
South Western	1,583	35·0	86	2·7	981	18·6
Wales	1,291	51·6	56	6·7	929	33·6
Midland	4,648	102·4	291	8·4	3,111	59·7
North Western	4,283	120·0	260	11·2	2,809	63·6
Scotland	2,279	65·5	107	4·9	1,776	45·0

Notes :
(1) and (2) See footnotes (1) and (2) to Great Britain table.
(3) The estimated element contained in these figures is not carried through to the regional figures.

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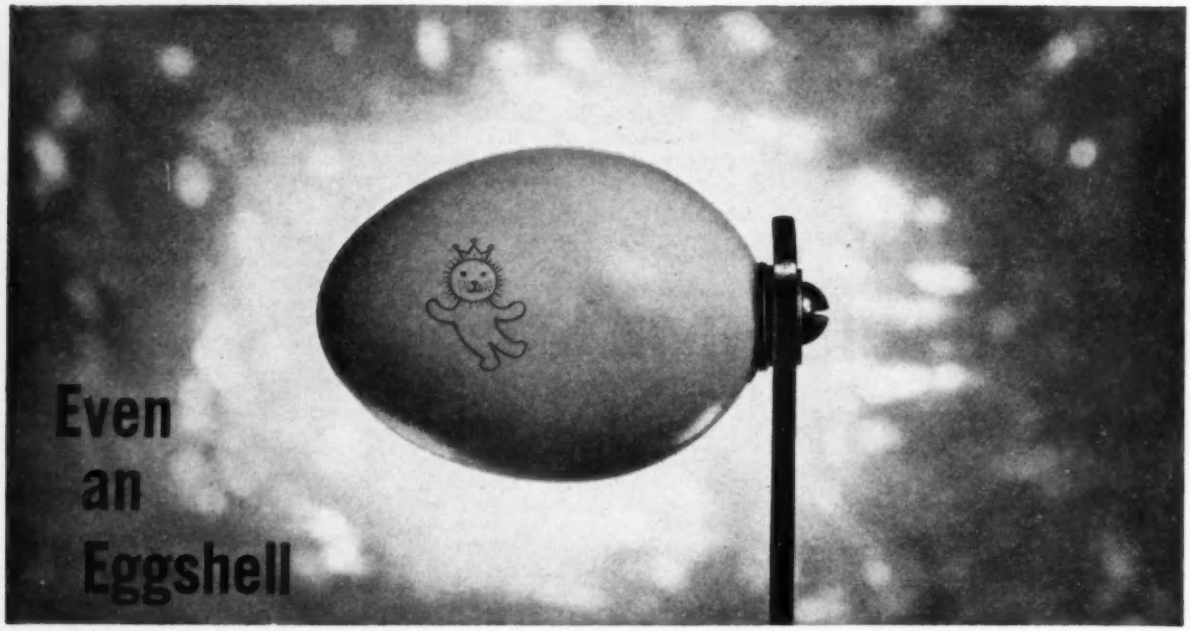

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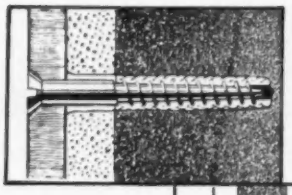

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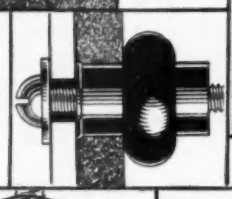

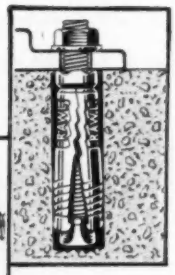

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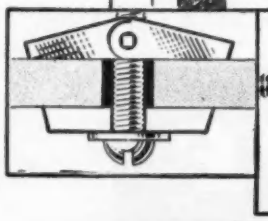

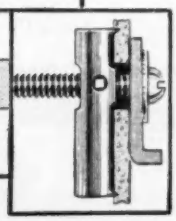

GRAVITY TOGGLES
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Building in the City

Plans for a 19-Storey Structure Approved

THE ERECTION of a 19-storey office building and the reconstruction of Holborn Viaduct and Moorgate Stations were among proposals considered by the Court of Common Council on September 22 when it held its first meeting after the summer recess.

Conditional permission was granted for the 19-storey building at 63-72 and parts of 73-77 Wood-street, part of 5-6-17 and part of 25-35 Monkwell-street, 1-10 Fell-street, 155-159 London Wall, parts of 2 and 8 and 3-7 Winchester-avenue, parts of the rear portion of 2-6 Silver-street and the highways of Monkwell-street, Fell-street, Winchester-avenue, Salters' Court and part of Wood-street Square. In addition to office accommodation the building will incorporate shops, a public house, restaurant and basement car park. The application had been submitted by Bernard Gold and Partners, of 4-6 Savile-row, W1.

Other schemes for which conditional permission was also granted were:

Two-storey extension to complete the deep therapy block at St. Bartholomew's Hospital, Bartholomew-close (Adams, Holden and Pearson, 38 Gordon-sq., WC1);

Addition and alterations to provide a residence for the Rector at the Church of St. Mary-le-Bow, Cheapside (Laurence King, 9 Gower-st., WC1);

Reinstatement of war damage to All Hallows Church, London-wall (D. E. Nye and Partners, 172 Buckingham Palace-rd., SW1); and

Reconstruction of Holborn Viaduct Station, including the erection of a new building over that part of the station fronting Holborn Viaduct (Ronald Ward and Partners, 29 Chesham-place, SW1, for the British Transport Commission).

Rebuilding of Moorgate Station

Permission was granted on outline applications for the rebuilding of Moorgate Station (Metropolitan) and the erection of shops and offices over on a site extending from Moorfields to Moor-lane (R. Seifert, 28 Gt. Ormond-st., WC); the demolition of an existing building at 27-28 Clements-lane (St. Clements House) and rebuilding for continuation of use (Ley, Colbeck and Partners, 5 Bishopsgate, EC2); re-arrangement of the existing lay-by and construction of an inquiry office, canteen, waiting room, lavatory accommodation and inspectors' office at the Minories Coach Station (London Transport Executive).

Permission was refused on an application to redevelop an 8,956 sq. ft. site at 10 and 11 Salisbury-sq. and St. Brides-passage for office use. The Town Planning Committee's reasons for refusal were that the scheme did not comply with the Corporation's daylighting standards, that a car lift could not be approved as a satisfactory means of access to the car park, and that no provision was shown for loading or unloading within the curtilage of the site. A fourth reason for refusal was that the site should be developed together with 1, 2 and 3 Dorset-buildings, as neither the site which was the subject of the application nor the site of 1, 2 and 3 Dorset-buildings was capable of satisfactory separate development in accordance with present planning standards. The application had been submitted by Ardin and Brookes & Partners of 129 Mount-st., W1.

LMBA

Annual Education Conference

THE ELEVENTH annual conference on Education in the Building Industry organised by the London Master Builders Association will this year be held in Ironmongers Hall, on Monday, November 7.

The discussions at the conference will be under two main headings: 'A New Approach to Apprenticeship' and 'Graduate and Other Advanced Training.' The chairman of the conference will be Mr. E. J. Cook, FIOB, president of the LMBA.

Medal Presentation

THE ANNUAL presentation of silver and bronze medals by the London Master Builders Association to outstanding craft apprentices and students of builders' quantities will take place in Carpenters Hall on Friday, November 4.

The medals will be presented by Major Sir Charles Maclean, Bart., the Chief Scout. The Rt. Hon. the Lord Mayor, Alderman Sir Edmund Stockdale, will preside.

Visits of Overseas Industrialists

THE GAUGE AND TOOL MAKERS' ASSOCIATION will be the hosts to a group of 35 directors of firms attached to Detroit Branch of the American Society of Tool and Manufacturing Engineers during their visit to this country in October. They are to be entertained at a luncheon at the Savoy Hotel on October 5 and by the Dollar Exports Council on October 7.

A PARTY of twenty-six members of the sand and gravel industry of Sweden arrived here on September 27 for a short study tour of the industry in this country. They are members of the Grus-Och Makadamföreningen, the Swedish sand and gravel association. A programme has been arranged by the Sand and Gravel Association of Great Britain.

Company News

EASTWOODS LTD. recommend the payment of a final dividend of 12½ per cent (less tax) on the ordinary shares of the company for the year ended March 31, 1960.

THE GEORGE COHEN 600 GROUP LTD. recommend the payment of a final dividend of 8½ per cent (less tax) on the ordinary stock of the company for the year ended March 31, 1960.

THE KETTON PORTLAND CEMENT CO. LTD. recommend the payment of a final dividend of 17½ per cent (less tax) on the ordinary shares of the company for the year ended June 30, 1960.

SHARPE & FISHER LTD. recommend the payment of an interim dividend of 5 per cent (less tax) on the ordinary shares of the company for the year ended December 31, 1960.

Personal Column

John Laing and Son (Holdings) Ltd. have appointed MR. W. B. HAUGHAN and MR. G. W. GREENHOW to the board of directors. Mr. Haughan is also president of John Laing and Son (Canada) Ltd., and Mr. Greenhow is an assistant managing director of John Laing and Son Ltd.

John Laing and Son Ltd. have appointed MR. E. U. BROADBENT as manager of the company's civil engineering division, and MR. C. H. CRAFT as manager of the London division.

MR. HALL, plant sales manager of James F. Low & Co. Ltd., Monifieth, Dundee, Scotland, has taken over duties of manager of the contractors' plant department. He will now be responsible for the affairs of the Company relative to all 'Rob Roy' equipment.

Builders' Foremen

London Association's Successful Ladies' Festival

A HIGHLY SUCCESSFUL LADIES' FESTIVAL was held by the London Builders' Foremen's Association in the Connaught Rooms on September 24, when the President, Mr. W. S. L. Trickey, with Mrs. Trickey, received members and guests with their ladies.

Following dinner, MR. E. J. COOK, BSC, President LMBA, in proposing the toast of the London Builders' Foremen's Association and its President, referred to its history and recalled that the LMBA's then director, the late E. J. Brown, had played quite a part in its foundation in 1921. Since early days, the two associations had worked closely together for the benefit of the industry and community, and he (the speaker) believed that it was in recognition of this that the foremen had done so much honour to Mr. G. H. A. Hughes, the retiring Director—something that had given all members much gratification.

Mr. Cook revealed that Mr. Hughes was to enter hospital on September 25 for the first of two operations for eye cataract; all would wish him a complete and speedy recovery.

Turning to LBFA affairs, Mr. Cook said that the association was playing an important part in LMBA matters. 'The welfare of our firms depends very largely on the general foreman, and the Association's work in laying on lectures, technical courses, films and debates on subjects of interest is much to be commended.

Mass-Production and Building

'Building has essentially been a craft industry, and it has not been easy for men brought up in that tradition to accept new ideas. But that acceptance is now well on the way, and the foremen have done a great job in helping those new ideas to gain ground.'

One such idea was mass-production; this had been accepted in some industries,

but not in building. 'We do well not to delude ourselves that it doesn't apply to this industry also,' said Mr. Cook who, in conclusion paid a warm tribute to the Association's President, Mr. Trickey, both on the important work he had just ended on the new Television Studios, Wood-lane, and on the responsible work his association was doing in training young men.

In response, MR. W. S. L. TRICKEY said that, working together as they did, the two associations could do much for young entrants. He paid tribute to Mr. Hughes' assistance over the years and wished him a speedy recovery on behalf of all members. As for the year just passed, there had been a record number of new members, and a full attendance at the films and lectures and business meetings. For this the Management Committee must take credit. He also paid a warm tribute to Mr. R. E. Stenning, secretary of the LMBA, and to Mr. Gordon Tomalin for unstinted help, and to their own social committee, under Mr. F. J. Beach-Barnard, for organising the Festival.

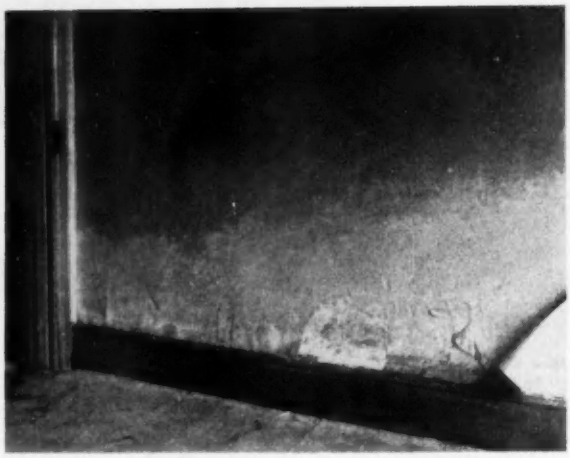
The toast of 'The Ladies,' proposed by MR. S. G. STONE (past-President) was responded to by MRS. E. H. B. HART.

Dancing and an excellent cabaret followed dinner, during which flowers and handsome presents were distributed to the ladies.

Those present included: Mrs. E. J. Cook, Dr. E. H. B. Hart (Director, LMBA), Mr. and Mrs. R. E. Stenning, Mr. Gordon Tomalin, Mr. and Mrs. D. Perrett, Mr. and Mrs. Ian M. Leslie, Mr. W. R. Taylor, and members of the Ladies' Festival Committee — Messrs. F. J. Beach-Barnard (chairman), H. T. Piesse, A. Derret, H. Hamman and A. G. Montagu (secretary).

Damp-proof Course Insertion

Practical Demonstration by Building Research Station



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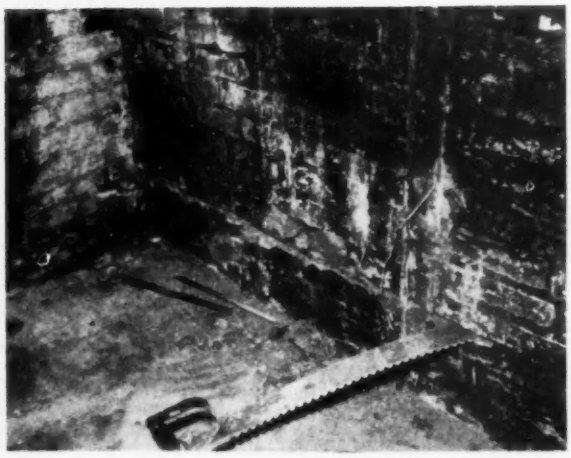
These four photographs were taken at a recent demonstration of the saw method of damp-proof course insertion arranged by the Building Research Station at a house in Luton. The house was lent to the BRS for the demonstration by Messrs. Carter and Simpson Ltd. The photographs provide a practical illustration of the method of damp-proof course insertion described in BRS Digest 107 (HMSO, price 3d.); they show: (1) Interior view of wall affected by rising damp with typical wavy line clearly seen; (2) commencement of cutting a slot made from an external quoin; (3) insertion of copper membrane by means of anvil and punch; (4) work in progress with insertion of membrane completed to position immediately adjacent to saw

3

4



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Book Reviews

The Construction of Buildings; Theory and Design in the First Machine Age; Paper Hanging; Safety on Site; Dictionary of Civil Engineering; Standard Ready Reckoner

THE CONSTRUCTION OF BUILDINGS. By R. Barry, ARIBA. (London: Crosby Lockwood and Son, Ltd.) Price 18s. net.

THIS BOOK, and volume I (previously published), together cover the first two years of a course in building construction. The present volume deals with masonry, windows, cills, doors, partitions, fireplaces and flues, stairs, internal finishings, and external renderings. A foreword indicates that two more volumes are likely to follow.

The work is clearly written and explains the reason for doing things as well as the way in which they are done. Each chapter concludes with a list of the relevant standard specifications, codes of practice, and publications by the Building Research Station. In all respects, the information is right up to date; and although traditional methods of construction are included where still in use, modern substitutes receive fuller attention, e.g., dowelled joints in panelled doors, standard 'storey-frames' in partitions, pre-cast 'throat-units' in fireplaces, and spring-balances (*vice* cords and weights) in sash-windows.

The tricky practical details of cavity-walls, fireplaces, flashings, and the fixing of metal casements and door-frames, are well described. The enormous vocabulary of building is augmented by several useful terms, such as vent lights, dead lights, and sub-frames; and the 'sacrificial' action of rustproof zinc coating on steel casements is fully explained. The 272 line-drawings are excellent and show ingenuity as well as knowledge.

MARTIN S. BRIGGS.

THEORY AND DESIGN IN THE FIRST MACHINE AGE. By Reyner Banham. (London: The Architectural Press.) Price 45s. net.

THE FIRST THIRTY YEARS of this century saw a revolution in architecture. The development of science and technology demanded that the art of building should be equal to the challenge and this volume contains an account of the answer to this challenge. More specifically it is a history of the thoughts and deeds of the leading architects and architect/philosophers of this first 'machine age,' the period in which the 'handicraft æsthetic' was dropped and finally discarded in favour of the 'æsthetic of the machine age.' It was the period in which architects who wished to develop their art in sympathy and in parallel with the rapid development of science, could no longer look upon the world of technology with hostility and indifference.

The skilful presentation of such a complex and difficult subject, despite the overwhelming mass of ideas and influences already recorded in the writings of the architects and philosophers themselves, is a remarkable achievement. Perhaps more than in any other period the great masters of it, men like Gropius, Le Corbusier, and Mies van der Rohe, wrote as extensively as they built, and used their writings to explain and to justify their designs, and their buildings to confirm their theoretical writings.

In 1941, Le Corbusier, in 'The Four Routes,' wrote: 'In spite of isolated miracles, the machine age has not yet got into its stride. It has not been able to achieve its proper measure of abundance, nor learnt to bridge the gap and establish a new tradition of human happiness. . . . Mechanisation can and, properly directed, will develop into the incalculable riches of a completely new civilisation.' The great masters of modern architecture have continued to work towards this new ideal, though not without much inherent opposition to change.

This theme of a 'machine age architecture' is discussed and illustrated by Mr. Banham in a volume packed with references to buildings, large schemes, industrial designs, paintings, sculptures and writings from which he quotes extensively. The book is an exciting one and the author's enthusiasm for his subject is highly infectious. For this reason it will provide a knowledgeable background and a firm starting-point for further study of the pre-disposed and modern influences which brought about these great developments in architecture. There are over one hundred illustrations in half tone and an index to names and buildings referred to in the text. Finally, there is an index to topics, publications and organisations.

PAPER HANGING. By J. H. Goodier (Manchester: The Sutherland Publishing Co., Ltd.). Price 2s. 6d. net.

THIS IS THE FIFTH and completely revised version of the original manual compiled in 1927 by the late W. H. Cantrill and the late W. G. Sutherland. It is a small, unpretentious volume, prepared by a lecturer in painting and decorating who has dealt with his subject in a practical and factual manner.

The book is prefaced by a brief history of wallpaper, the first example of which was discovered in this country in 1509. This is followed by a useful chapter on wallpaper classification which is a glossary in itself and describes the meaning of such terms as 'grounds,' 'soirettes' and 'moirés.' Then follow sections on tools and equipment, dimensions, measuring techniques, and the preparation of surfaces. Techniques of wallpaper preparation and hanging are covered and there are some useful notes on how to overcome obstacles and awkward surfaces. Borders, cut-out ornaments, stilings, panels, reliefs, varnishing and the difficulties encountered when hanging heavy papers and wall-fabrics are all succinctly and adequately explained.

There is a concluding section on geometry for paperhangers in which a few simple problems are explained. The popularity of this manual has already been proved by the success of its four previous editions; amateurs and professionals alike will undoubtedly continue to find much of value.

SAFETY ON SITE. By B. A. C. Whyte. (London: United Trade Press, Ltd.) Price 20s. net.

THIS IS A MANUAL of accident prevention for all who are concerned with safe practice in the building and constructional engineering industries. It is the first book of its kind to be published in this country. In 21 chapters, Mr. Whyte provides a comprehensive guide to the general principles underlying safety at work, the Factories Acts, official forms and how to use them, safety training, and accident reports and records.

The book is freely illustrated; photographs show both safe and unsafe ways of tackling a building job and numerous drawings and sketches demonstate how particular problems have been overcome in Mr. Whyte's own company. 'Safety on Site' is essentially a book for continuous reference and a proper study of its contents and the application of its principles will, without doubt, help to bring about a reduction of accidents.

DICTIONARY OF CIVIL ENGINEERING AND CONSTRUCTION MACHINERY AND EQUIPMENT. Compiled in English and French by Herbert Bucksch. (London: Contractors Record Ltd. for Editions Eyrolles, Paris.) Price 65s.

THIS HANDY little volume, though rather expensive, is a 'must' for civil engineers and others whose work brings them into contact with the Continent and places where French terms are used. The subjects covered include road and airfield construction, soil mechanics, dam and harbour construction, tunnels, foundations, bridges, prestressed concrete, and construction materials.

A definite need has long been felt for a dictionary of this kind, and it is hoped that it will be a regular feature, being constantly brought up to date in a sphere where new terms are used as new developments come about.

STANDARD READY RECKONER (London: Ernest Benn. Ltd.). Price 3s. 6d. net.

READY RECKONERS are always useful additions to office paraphernalia and personal equipment. This one, published for the 'Timber Trades Journal,' is based on relative prices and includes tables per foot run for squares and other standard sections, per cubic foot, loads of 50 cubic feet, per superficial feet and per lineal feet. There are also tables of relative prices of round timber by various measurements and contents of a foot run of round timber by different measurements. Finally, there are tables based on running feet in Petrograd standard, and a table of superficial measurements.

A. D.

*** Books noted in these columns may be obtained on application to the Book Dept., 'The Builder,' 4 Catherine-street, Aldwych, WC2. Cash (to include postage on books to the value of 10s., 9d.; over 10s., 1s. 6d.) should accompany the order.*

Tokyo's Development Problems

Urban Sprawl a Tremendous Obstacle to Sound Planning

BY JOHN GRINDROD, BA(COM)

BECAUSE the rapidly increasing population has overtaken the ability of the municipal authority to meet the demand for housing and other social services, Tokyo is a good example of what is generally known as an 'overgrown city.'

Whereas at the end of World War II the population of Tokyo sharply dropped to 3.5 millions, it has since rapidly regained its reproductive momentum and the average annual increase over the past twelve years has reached an amazing figure of 300,000, to yield an overall population total of 8,913,000 by March, 1959. How acute must be the problems arising from this striking increase of population can be judged to some extent by comparing it with the case of New York City, which, undamaged by war, had an average increase in population of about 50,000 between 1941 and 1950. Not only has this growth of population meant so many more people to cater for but it has brought about an undesirable urban sprawl and Tokyo's community has expanded far beyond its administrative boundary.

In 1930, the population of the three central wards of the city was 751,000, but, by March, 1959, it had been reduced to 538,000. On the other hand, the population of the city's 20 other wards rose from 4,236,000 in 1930 to 7,143,000 in 1959 and that of the suburban areas has risen from 416,000 in 1930 to 1,232,000 in 1959. Tokyo is, in fact, one of the most thickly populated cities of the world, embracing its 8.91m. inhabitants within 2,023 sq. km. (781 sq. miles).

From the point of view of town planning, Tokyo is regarded as having seven defects: excessive concentration of population and industry, uncontrolled urban sprawl, degraded residential environments, lack of open spaces, traffic congestion, insufficiency of public facilities (water supply, drainage, sewage disposal, educational facilities, etc.) and shortage of dwelling houses. Japan realises that the concentration of population and industry in major cities like Tokyo and Osaka is a symptom of an unbalanced economic development and because of its adverse effect on the underdeveloped regions calls for a relocation of the industrial population on a nationwide basis.

Though the widespread damage resulting from the war provided a golden opportunity for the planned rebuilding of Tokyo, the city's impoverished finances prevented such a plan from being put to practical effect and, in the meantime, a major part of the population has settled in the suburbs because of the high cost of land in the centre of Tokyo.

Because of the lack of planning, factories and houses have been built haphazardly and some areas have become densely packed with small houses and the existence of slums and closely built-up sections is now a tremendous obstacle to serious town planning. In these districts the density of population is as high as 220-230 per hectare (100 to the acre), most of the houses being of the one- or two-storey type.

Shortage of Dwellings

The shortage of dwellings in Tokyo is estimated at about 420,000 and despite the efforts made by both the national and metropolitan housing authorities, the supply does not catch up with increasing population.

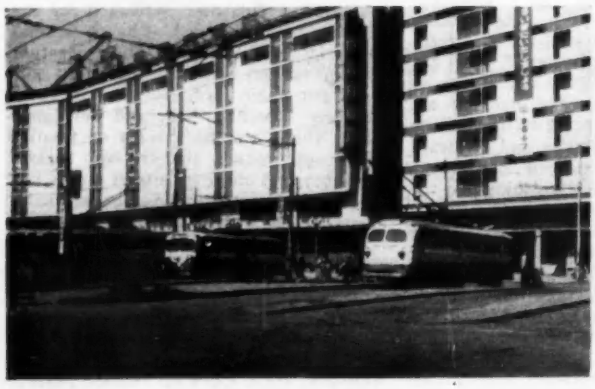
Of the 1,300,000 pre-war houses in the administrative area of Tokyo, only about 630,000 survived and the return of a large number of evacuees at the end of the war caused an acute housing shortage and strict control was enforced over building. After 1950, however, it gradually became possible for people to obtain loans from the Housing Loan Corporation and the Tokyo Metropolitan Government for private building and the construction of municipal houses began in 1951 soon after the enactment of the Public Housing Law.

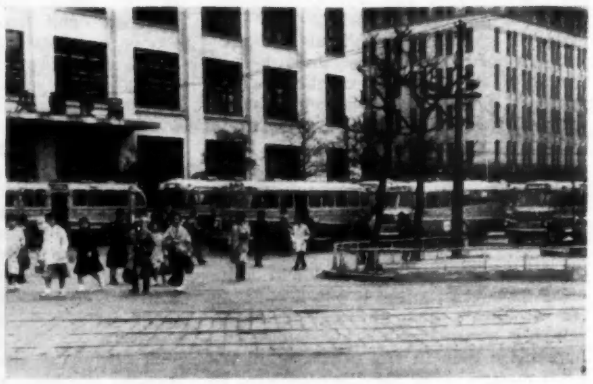
Up to 1957 some 60,000 municipal houses had been constructed by the Metropolitan Government. Of those requiring houses in 1958, only 3.4 per cent were said to be living in shelters other than dwelling houses, most of the others requiring houses either by buying or renting because they were living with other families or in restricted quarters. Municipal houses are let on a system of drawing lots. The Japan Housing Corporation, a Government agency, constructs comparatively high (about Y6,000) rented dwellings, while the TMG builds medium (Y4,000) and low (Y2,000) rented houses.

Because of the danger of earthquakes and subsequent fire, the height of buildings in Japan is restricted to 31 m. above ground level. Up to this height, however, the construction of multi-storey blocks is encouraged and special loans are made available to builders of otherwise lower business buildings to increase the height, provided that half the floor space is used for their own or other's residence. This system of 'multi-storeying' and housing is said to be proving successful.

Tokyo's largest housing programme is the Kirigaoka housing project now being undertaken by the Bureau of Housing on a site in the Kita ward, where some 17,000 people are expected to be provided with homes by about 1963. Its 52 hectares are pleasantly landscaped and it is within easy access of central Tokyo. Here the general type of housing is a four-storeyed large match-box-like block with 32 flats, each having a floor space of 40 sq. m. To break the monotony of the layout some blocks are star-shaped. Some have shops on the ground floors. Some 4,000 flats are scheduled for construction.

The site is divided into north and south sections of approximately equal size, but the northern section will contain 1,500 flats and two schools, while the southern section will have 2,500 flats. Each section will constitute a community having a green belt, a small park, a kindergarten, a public bath-house and a market. For each of the communities being built in





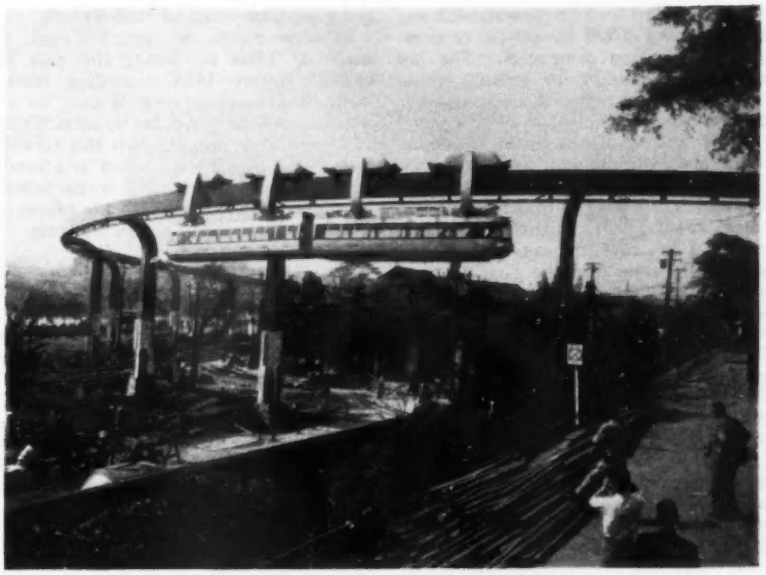
Left: New buildings in the centre of Tokyo. Right: Nearly 1,500 buses operate on 105 routes in Tokyo

Tokyo there will be two primary schools, a junior school, a clinic, a nursery, a park, an outdoor theatre, a civic hall, a library, a post office and a ward branch office.

In addition to the crowding of the suburbs, the congestion of passenger transport has become acute, schools are overcrowded, the sewerage system is inadequate. The latter has been laid out only within 20 per cent of the area of the city's wards and only 14.7 per cent of the total human waste is sent to disposal plants. The remainder is transported to farming villages for use as fertiliser or dumped into the sea.

The National Capital Construction Law of 1950 aimed at removing these defects and at reconstructing the capital city of Japan. An emergency five-year plan was drawn up and put into effect in 1952 but its progress was slow. Only 28 per cent of the planned work was completed and only 3,240 million yen out of 116,500 million yen of appropriations were spent. Failure was due chiefly to the fact that the law did not provide for financial backing to the plan, which applied only to the administrative area of Tokyo, notwithstanding that its real community had extended far beyond these boundaries. A later plan in 1956 also failed to overcome the shortcomings inherent in the first plan.

A subsequent National Capital Region Development Law, however, was enacted to cover a radius of about 100 km. and to deal with this uncontrolled concentration of population and industry by fostering satellite towns. It divides the area into an inner urban area of about 15 km. radius of Tokyo Station where land utilisation and population density will be rationalised and buildings made multi-storeyed and fireproof; a green belt area with a width of about 10 km.; and a peripheral area where satellite towns will be designated and redeveloped as fully integrated units.



The trial monorail erected in Tokyo to test the suitability of this form of transport for moving large numbers of people

Railway network of inner Tokyo

In accordance with the law, a National Capital Region Development Commission has been set up as an external organ of the Prime Minister's office. The commission is composed of five members and is assisted by an advisory body known as the National Capital Region Development Council composed of 43 members, three from the House of Representatives, three from the House of Councillors, twelve planning experts, nine officials of government agencies, eight governors of the prefectures and eight chairmen of the prefectural assemblies.

The plan itself consists of a master plan and a number of construction plans. The former covers the size of the population and its distribution in the region; industrial structure and location; land utilisation; the provision for passenger transport. The construction plans are drawn up as ten-year plans and include such matters as the acquisition of sites for houses; amplification of the road system; betterment of traffic facilities; layout of parks and open spaces; extension of waterworks and sewerage; construction of refuse disposal plants; improvement of rivers, coast and anchorages; construction of multi-storey and fireproof buildings; slum clearance; and the construction of primary and junior-high school buildings.

Annual Programme Drawn Up

Annual programmes are drawn up for which budget appropriations are made pursuant to the financial provisions of the new law. These stipulate that the National Government shall extend special subsidies to the local authorities which intend to construct facilities for compulsory education in the designated area of the satellite towns; that the National Government shall facilitate the raising of the necessary funds for interested local authorities and private contractors; and that local authorities may issue public bonds for such construction work.

It is estimated that the population of the inner urban area, which includes the suburbs, would normally increase to 14,300,000 by 1975 while the suitable maximum population is regarded as 11,600,000. To deal with the difference between these two figures, it is planned to decentralise 1m. into satellite towns over an initial period and the remainder over a rather shorter subsequent period.

To cope with traffic congestion, parking lots will be constructed in the city centre. Cars requiring parking space in this area are estimated at 6,500, of which 1,200 are to be provided with parking

lots by the Metropolitan Government and the remaining 5,300 by public corporations and private companies. The law makes it compulsory for parking spaces to be attached to any large building being constructed.

Parks and open spaces in the inner urban area will be increased from the present 0.26 acre per 1 000 persons to 0.5 acre and it is expected that the standard water supply will increase from the present 1.2m. to 1.8m. tons a day when the Ogochi Dam and the Sagami River pipeline are brought into operation. Another source of water supply will, however, still be required for industrial use. It is planned to increase the area covered by sewerage systems from 11,555 hectares to 18,754 hectares, or 34 per cent of the wards area during the initial ten years.

Public works in Tokyo are carried out by the Bureau of Construction whose duties cover a wide range. The most pressing work to be done in the city is the paving of roads. Most of Tokyo's main roads and streets are paved but not all of them are completely paved and a good deal of permanent work remains to be done.

Five large rivers flow through the city into Tokyo Bay and they form a network of water transportation with 170 smaller rivers and canals. These often flood the downtown lowlying land and a large programme of sea and river wall construction is being carried out. Up to 1957, 104 km. of embankment walls had been completed at a cost of Y2 000m. This important industrial area in eastern Tokyo is sandwiched between the Arakawa and Edogawa Rivers facing Tokyo Bay in the south and is also confronted with another grave problem—that of land sinking.

In some places the land has sunk as much as 2.848 m. during the past 38 years. During 1956, recording marks made at 137 points sank 37 mm. on an average, and, at one point by as much as 112 mm. It is thought that this sinking is caused by land contraction as a result of the fall of underground water, which is pumped to the surface to the extent of 230,000 tons a day for industrial use.

Tidal Wave Danger

It is feared that if this pumping continues, the land might sink yet a further metre. At present, this area is between one and two metres below sea level and without a complete system of embankment walls would be swallowed up by the sea. For instance, when large tidal waves caused by the typhoons 'Kathleen' in 1947 and 'Kitty' in 1949 swept this area, almost all the factories sustained damage which totalled Y50 000m.

The sea wall now protecting this area is 5 to 6 m. high, while that of the canals is 3.6 to 4 m. high. The sea embankment is 5.5 m. wide and forms a track on which two cars can pass each other. These flood defence measures are being continued in other districts under a six-year plan and a 16 km embankment surrounding an area of 2 475 sq. km. was begun in the 1957/58 fiscal year, which, on completion, is estimated to cost Y7,500m.

To help relieve traffic congestion, which is acute in Tokyo, the Metropolitan Transportation Bureau is constructing an underground railway between Magome and Oshiage, while the Teito Rapid Transit Authority, already operating two underground lines, is constructing a further line, and another is in the planning stage. A trial monorail has also been constructed with a view to testing the suitability of this means of transport for the mass movement of people between the city and suburbs.

Up to 1958, the master plan and eleven ten-year construction plans for the inner area had been drawn up under the National Capital Region Development Law of 1956. The remaining plans are under the deliberation by the authorities concerned.

Much difficulty is, however, being experienced in implementing the plan. The preservation of the green belt is strongly opposed by the residents in this area and the building activities which have resulted in the sprawl have been difficult to quell. If proper restrictions are imposed in the green belt the price of land there will fall considerably and investors, whether speculative or not, will suffer.

While farming is being promoted in the green belt area by the government, existing suburban centres are being treated as quasi-satellites and their further controlled expansion is being allowed. In the meantime, the proposed land utilisation in the green belt is being drafted by the Town Planning Association.

In the two legitimate satellite towns, the authorities concerned are going ahead with preparations for the siting and construction of factories and houses.

Since there is no government unit exercising unified administrations over the whole of the National Capital Region, the success or failure of the development of the region depends on the co-operation of all the authorities concerned.

Optical Properties of Glazing Materials

Report of DSIR Colloquium

Following is a summary of a colloquium held at DSIR Headquarters in November last, which was attended by about fifty representatives of manufacturers of glazing materials, users, and testing organisations. The purpose of the colloquium was to discuss the measurement and application of data on the optical properties of glazing materials, with particular reference to those which are not perfectly clear or perfectly diffusing (e.g., the resin bonded fibre-glass materials). The report, by J. B. Collins, which is Crown Copyright reserved, is issued as Building Research Station Note No. E999 (to be published).

THE GROWING interest in the use of glazing materials which are not perfectly clear or perfectly diffusing has led to a demand for information on their optical and photometric properties in order to assist the daylighting designer to specify the type and arrangement of the glazing in a building. In particular, the advantages in respect of light-weight and cheapness of the resin bonded fibre-glass material has already led to its extensive use without much knowledge of its optical properties being available.

The measurement, assessment, and comparison of these properties of this type of material are by no means straightforward, and it was thought that an informal discussion between a number of representatives of the users, manufacturers, and testing organisations would be useful to show which of the properties are of the most immediate concern, and what would be the most profitable way of tackling some of the problems involved.

Work has already been carried out on some of the proposed studies, and it is intended shortly to discuss the detailed aspects of the measurements in a small technical panel.

The Basic Principles

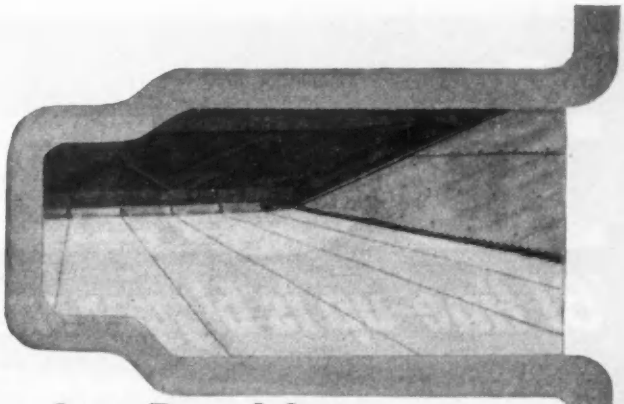
The colloquium opened with a discussion on the basic optics of diffusing materials and on fundamental laboratory photometric measurements of their performance. Laboratory measurements for determining the properties of a material include polar curves of the light distribution at all angles obtained from a narrow pencil incident at different angles to the surface, and these should in some cases be extended to include more than one plane through the axis of the incident beam. An integrated light transmission measurement could be obtained by the use of an integrating sphere collector to measure total transmitted light with either a parallel beam incidence or a totally diffuse incidence.

For normally diffusing materials like opal glass, etc., a conventional way of specifying diffusion factor had been agreed by the Commission Internationale de L'Eclairage, but it was pointed out that many of the conventions adopted for specification and measurement of highly diffusing materials were of little value in dealing with partial diffusers where a substantial portion of the light was transmitted more or less directly.

It was made clear, however, that these measurements are not of direct value to the architect or daylighting designer. The conditions to be allowed for in designing daylighting vary from an overcast sky, with a brightness distribution standardised by the CIE, to those of illumination at almost any angle of incidence by direct

LIGHTWEIGHT

SIMPLICITY OF FIXING



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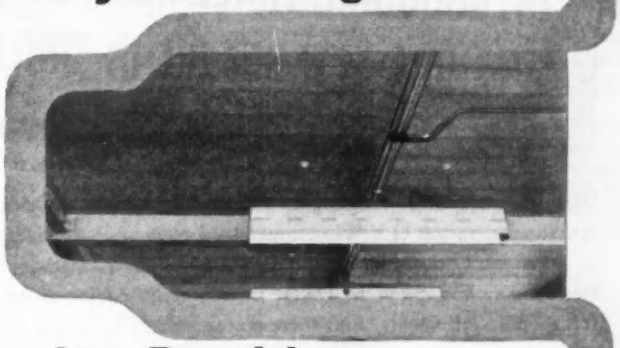

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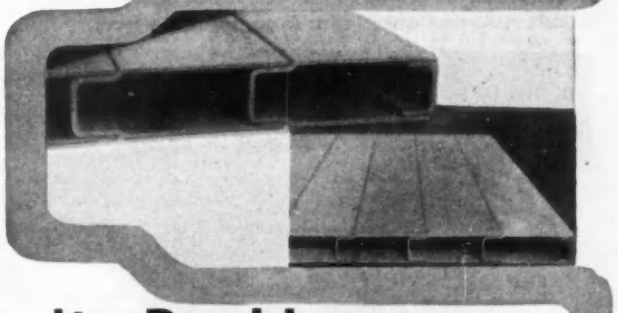

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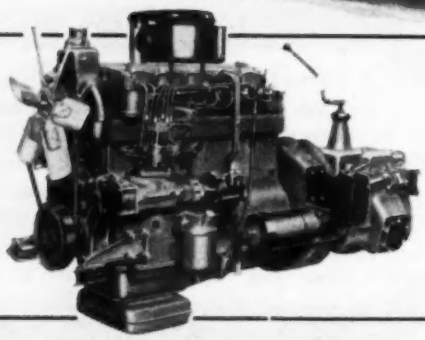

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sunlight, plus the light from a clear blue sky or from a blue sky with bright clouds (the last being the condition of highest natural illumination).

The architect and designer need to know what the distribution of illumination is inside the building and what the brightness of the glazing material (generally of corrugated form) is, as seen from various positions in the building, under these conditions. For some purposes also it is necessary to know the hiding power and degree of concealment of a source of light. They also need to know the amount of solar heat likely to be transmitted directly or by diffusion into the interior, and the amount of heat loss from low temperature radiation as well as thermal conductivity.

Complex Design Factors

These practical design factors are complex ones, and while it would in theory be possible to compute them from complete laboratory data for all spectral wavelengths with modern computing techniques, those who design for use of the material really require information which synthesises these complex quantities for a given set of conditions.

For the calculation of daylight illumination, there was support for the contention that since the BRS protractor method had been fairly widely adopted for clear glazing, it would be most likely to be of use to architects to produce modified protractors which would take into account the redistribution of daylight illumination by the diffusing material. One way in which it was proposed that the laboratory data could be used to calculate the new protractors was that a figure for direct light transmission could be used to calculate the direct component of daylight factor, and a total light transmission figure to calculate the internally reflected component. This figure of direct transmission would of course vary with angle of view and moreover a special protractor would have to be produced for each grade of diffusion and type of material.

For making a choice of material to diffuse sunlight into a building, it was suggested that materials should be classified according to their ability to diffuse the patch of sunlight on the floor from a roof-light, and that data on the brightness of the roof-light as seen from various angles should be available for each classification. For the manufacturer and user to be able to classify a material in the appropriate grade of diffusion, it would be necessary to develop a standard test as envisaged by the BSI which would classify the materials according to their performance in an actual building.

Bearing in mind the difficulty of interpreting any one figure of a complex series of quantities as a figure of merit of a product, it was pointed out that any overall figure would be certain to cause difficulties in comparing the merits of different materials, and it was emphasised that data on specific properties should be treated as such. A standard test to classify materials according to agreed grades of diffusion would however appear to be useful to help the most appropriate material to be chosen for a particular purpose provided that the grading related sufficiently well to actual performance.

One section of the colloquium was devoted to a discussion of the full-scale tests to be carried out to provide the necessary link between laboratory measurements or any tests on small samples, and design data. These tests were considered to be necessary, to enable account to be taken of the complex conditions of illumination from sun and sky, and of factors such as corrugations, interreflected light in the interior, etc., and to permit of subjective assessment of glare conditions and sunlight diffusion.

In order to remind participants of the range of materials now employed for glazing purposes and their methods of use, sections were included on classification of materials and principles of manufacture. Distinctions were drawn between the various plastics materials such as polymethylmethacrylate in clear and various grades of opal, polyvinyl copolymers, fibre-glass reinforced polyester resin and sandwich construction fibre-glass tissue bonded with polymethylmethacrylate, and between figured and uniformly diffusing glasses.

By-Laws and Fire

Strength and fire resistance of the various materials were briefly discussed and also their durability to weathering. There is very little in the way of regulations laid down in writing on the use of plastics glazing materials, but there is a tendency among authorities to use the Scottish by-laws as a guide. These by-laws do not distinguish between polymethylmethacrylate and glass reinforced polyesters, although there is a considerable difference in their tendency to spread fire.

The material is restricted to 10 per cent of the total roof area and to 30 sq. ft. for a single panel. This restricts to a certain extent the arrangement of glazing and the maximum obtainable daylight factor. The only other guide to the fire hazards involved in the use of combustible materials is given in BS 476 part 111 which gives standards of penetration or spread of flame likely to be caused by exposure to an adjacent building on fire.

Tests have been in progress for some time on weathering of fibre-glass resin samples, but in default of agreed methods of measurement of transmission, the only measurements which have been made of the changes taking place, apart from subjective estimates, concern the change in relative spectral transmission and the distribution of scattered light for one or two samples.

It was emphasised by several speakers that there was a great immediate need for some data on which daylighting design could be based, and it was agreed that the possibilities should be explored of conducting some laboratory tests under certain specified conditions which would be short cuts to the full photometric analysis, and enable a start to be made on methods of calculation. Some suggested representative tests were:

1. Measurements of brightness of sample illuminated by an equivalent of overcast sky with some agreed angle of slope and angle of external obstruction.

2. Measurements of brightness of sample illuminated by a single source with light incident at an agreed angle to represent conditions of sun illumination. (An angle of 45° was suggested as being useful for both vertical and horizontal glazing.)

3. Measurements of total light transmission of sample either by integrating sphere or integrating polar distribution of transmitted light for light incident at angles from 0°-90°. Alternatively, the transmitted light could be obtained in two components: the direct and diffuse components.

4. Classification (preferably by some simple test) of available materials into (say) 5 grades of diffusion, the grading limits to be chosen if possible so that variations in methods of measurement did not produce serious changes of grading.

5. Measurement of integrated heat transmission with high temperature (filament lamp) source and low temperature source.

Structural Engineers' Examinations

Associate Membership Results

FOLLOWING is the pass list in the Associate Membership Examination of the Institution of Structural Engineers, announced on September 20. The examination was held at home and overseas centres during July.

D. J. A. Alsop, P. J. Baker, M. Barczynski, J. D. N. Barnard, B. A. Barrett, P. J. Bates, T. J. Bell, J. W. Bielous, A. T. Biviji, D. P. Blain, R. J. Blake, J. Bradley, J. H. Brindley, D. R. Brown, R. S. Burbage, B. Butler.

J. C. Cannon, R. S. Carcas, K. O. Chmiel, B. H. Claxton, H. K. Cooper, D. H. Corlett, T. N. Cuffe, T. M. Day, E. L. Dines, G. I. H. Drewett, L. D. Durrant, P. H. D. Edwards, R. W. Everett, J. G. Fagan, F. C. C. Foulger, J. S. Fraser, P. H. Fudge.

G. Garner, M. G. Chaus, J. D. Gill, J. Golinski, D. E. Gollins, G. M. Gray, E. J. Griffin, C. F. Harris, B. Hayim, D. Henfrey, B. O. Hilson, A. Hocken, T. L. Holden, P. G. Holland, R. Holland, S. Houghton, D. J. Howard, B. L. Hurst, L. V. W. Ingram.

E. G. Jenkins, D. E. Jenkins, J. R. Johnson, P. F. Johnson, I. Jones, R. Jones, H. C. Judd, A. L. Kanoo, D. W. Knee, J. K. Langford, P. K. Lauroia, F. N. Lawson, D. J. Lee.

J. McDonald, D. W. Makin, P. E. Manthe, S. J. Marley, D. T. Matthews, A. L. Maynard, P. B. Minett, M. R. Moon, A. Mukhopadhyay, H. Nandi, J. S. I. Nasmith, W. R. Newstead, F. J. Pardoe, A. R. Parsons, K. V. Patel, L. Phillips, I. W. Plummer, E. H. W. Pollard, A. T. Povey, G. E. Puddephatt.

P. J. Reddin, A. J. Root, A. C. Roy, B. G. A. Schaller, R. Scott-White, A. T. Selkirk, P. Sheffield, D. F. Sillett, J. H. Slack, B. S. Smith, P. L. Sowerby, R. M. Spiller, A. H. Spruce, A. J. Stafford, M. J. Stedman, P. L. Stuart, N. W. Sutton.

D. F. Tynan, D. J. Upton, L. Van Blankenstein, C. Vaughan, M. Walsh, C. H. Ward, G. R. Watkins, I. R. Webb, J. Weston, T. C. White, C. E. Wilcox, B. C. Williams, J. H. H. Williams, D. E. Wiltshire, F. G. Winkler, R. C. Young.

THE BUILDER CURRENT PRICES

THE information given on these pages has been specially compiled for *The Builder* and is copyright. It is the intention that the details given should indicate fair average prices of materials, not necessarily the highest or the lowest. The prices apply to large quantities of materials loaded at works, delivered at London Stations or at site in London Area as stated. Prices for smaller quantities ex merchant's warehouse will necessarily be higher so as to include the stocking and handling costs involved. It is recommended that the prices of materials should be confirmed by inquiry from suppliers and merchants.

AGGREGATES AND SAND

Delivered site in full lorry loads. Average of prices for Boroughs of Westminster, Paddington, Holborn and St. Pancras.

		£	s.	d.
Pit Ballast	per yd.	1	5	5
Pit Sand	,,	1	3	8
Washed Sand	,,	1	6	9
¾ in. Shingle	,,	1	4	3
¾ in. Broken Brick	,,	1	0	9
Pan Breeze	,,	1	0	6
Fine or Coarse Foamed Slag Aggregate	per ton	3	8	0

2 yds. of fine and 2.6 yds. of coarse per ton.

CEMENT, etc.

Including non-returnable jute sacks or paper bags.

		£	s.	d.
Best British Portland Cement. Standard Specification delivered Charing Cross area.				
6-ton loads and upwards, site	per ton	5	10	0
1 to 6 tons, site	,,	6	2	0
Rapid-Hardening Cement in 6-ton loads and upwards to site	,,	6	0	6
1 to 6 tons do. site	,,	6	12	6
Aquacrete Water Repellent Cement. 32s. 6d. per ton on ordinary cement prices.				
Sulphate Resisting Cement. 32s. 6d. per ton on ordinary cement prices.				
Red, Buff or Khaki Colorcrete in 6-ton lots	,,	8	10	0
Other colours according to colour.				
In 4-ton lots from 308s. 0d. to 778s. 0d. per ton.				
White Portland Cement	,,	13	15	6
Under 1 ton	per cwt.		16	9
417 Cement (Ultra Rapid Hardening) in 6-ton lots and upwards	per ton	7	2	6
Super Cement (Waterproof), 32s. 6d. per ton above Portland Cement.				
Cullamix Tyrolean Finish, £11 8s. 0d. to £14 3s. 0d. (1-ton loads and upwards.)				
Lightning and Ciment Fondu Brands High Aluminous cement, 6-ton lots and up	,,	15	14	6
Stourbridge Fireclay, 6-ton loads at Railway Depot, London	,,	6	19	0
Stourbridge Fireclay, 6-ton loads (London sites)	,,	7	7	0
Moler Mortar Powder for Flue Bricks (London sites)	per cwt.	1	10	0

BRICKS

Full Loads.

		£	s.	d.
First Hard Stocks	per 1,000	15	19	6
Second Hard Stocks	,,	14	3	6
Mild Stocks (Kiln Burnt)	,,	10	5	0
Mild Stocks	,,	10	0	0
All loaded free into lorry at the works. The question of haulage is still very difficult and prices must be obtained from job to job.				
2½ in. Nominal Fletton Bricks to sites in W.C. district:				
Commons	,,	6	2	0
Cellular Commons	,,	6	2	0
Keyed do.	,,	6	4	0
Rustics	,,	8	2	0
Cellular Rustics	,,	8	2	0
Single Bullnose Commons	,,	8	4	6
Sandfaced	,,	9	2	0
Tuscans	,,	9	17	0
Saxons	,,	10	5	0
Golden Buffs	,,	10	12	0
Dapple Light Facings	,,	10	19	6
Heather Facings	,,	10	15	0
Best Blue Pressed Staffs (London stations)	,,	30	12	6
do. do. (London sites)	,,	30	14	0
do. Bullnose (London stations)	,,	31	11	6
do. do. (London sites)	,,	31	13	0
Blue Wire Cuts (London stations)	,,	27	5	0
do. do. (London sites)	,,	27	6	6
Midhurst Lime Bricks (London sites)	,,	11	0	6
Uxbridge Whites (London sites)	,,	10	19	0
Special Purpose Sandlime Bricks (London sites)	,,	8	12	0
Best Stourbridge Fire Bricks:				
2½ in. (London stations)	,,	30	12	3
2½ in. (London sites)	,,	31	1	0
3 in. (London stations)	per 1,000	36	14	9
3 in. (London sites)	,,	37	5	3
2½ in. Moler Flue Bricks (London sites)	,,	31	10	0
2½ in. Machine-made Sandfaced Red Facings (London sites)	,,	17	11	6
2½ in. Machine-made Multi Red Facings (London sites)	,,	17	16	6
2½ in. Hand-made Sandfaced Red Facings (London sites)	,,	19	15	0
2½ in. Hand-made Sandfaced Multi-Colour Facings (London sites)	,,	19	15	0
Hand-made Sandfaced Cherry Red Facings, Berkshire district (London sites)	,,	19	13	0
Hand-made Sandfaced Multi-Colour Facings, Berkshire district (London sites)	,,	19	13	0
Rubber Bricks for gauged arches (London sites)	,,	49	1	3
2½ in. Surrey Clamp Burnt Multi Stock Facings (London sites)	,,	15	16	6
2½ in. Surrey Kiln Burnt Multi Stock Facings (London sites)	,,	17	7	0
Glazed Bricks (London sites), White, Ivory, Brown:				
Stretchers	,,	64	0	0
Headers	,,	63	0	0
Quoins, Bullnose and 4½ in. Flats	,,	80	0	0
Double Stretchers	,,	85	0	0
Double Headers	,,	77	10	0
One side and two ends	,,	87	0	0
Two sides and one end	,,	89	10	0
Splays and Squints	,,	83	0	0

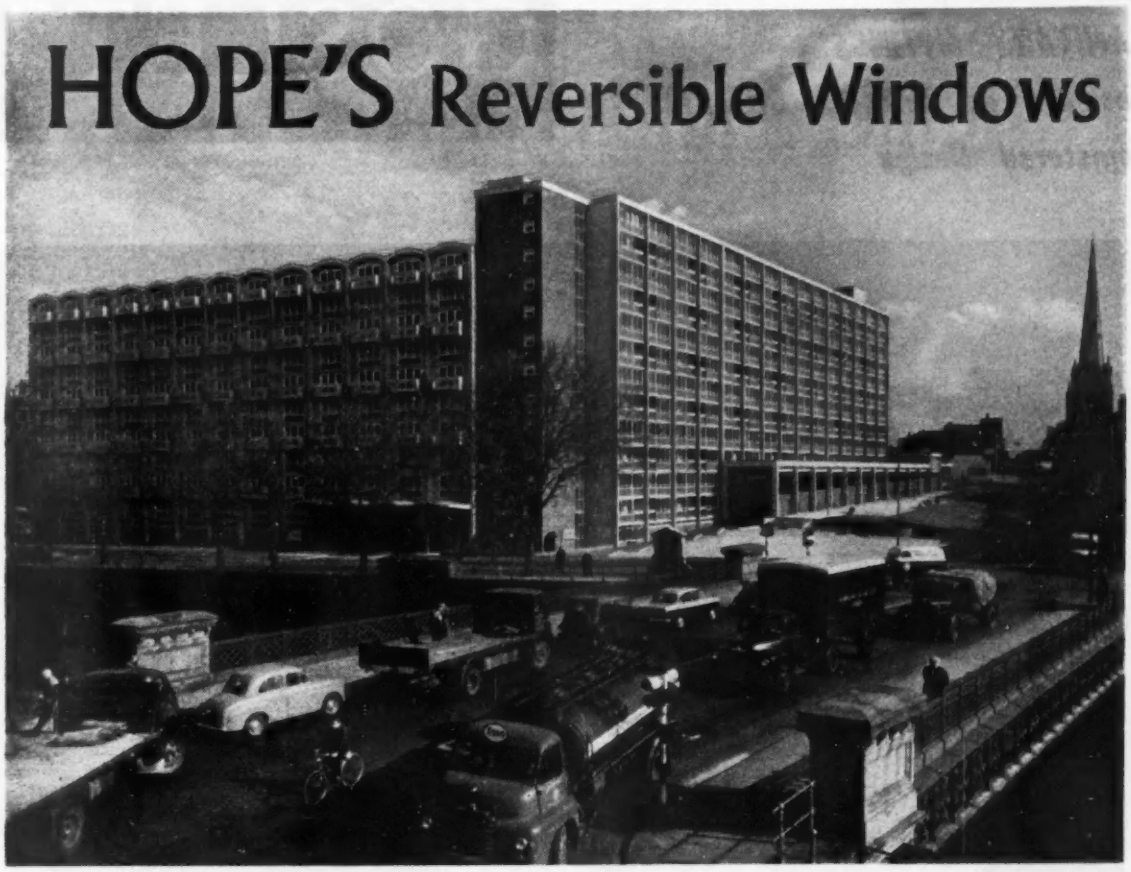
Cream and Buff, £3 extra over White. Other colours, hard glaze, £8 10s. 0d extra over White. All above prices plus 32½% for Best quality and plus 32½% less 10% for Second quality.

PARTITION SLABS, etc.

Delivered Central London Area. (W.C. District.)

		£	s.	d.
HOLLOW CLAY PARTITION BLOCKS (Keyed)				
Minimum lorry loads				
*2½ in. 140 yds.	per yd. sup.		4	6
BUILDING BLOCKS (Keyed)				
*3 in. (6 cavity) 110 yds.	,,		5	7
*4 in. (6 cavity) 90 yds.	,,		7	0
6 in. (8¾ in. × 5¾ in.) 1,250 blocks	per 1,000	27	13	0
* Half blocks at no extra charge.				
CLINKER CONCRETE				
2 in. 100 yds.	per yd. sup.		3	9
2½ in. 85 yds.	,,		4	4
3 in. 75 yds.	,,		5	3
4 in. 55 yds.	,,		6	5
CRANHAM TERRA COTTA				
2 in.	,,		6	9
2½ in.	,,		7	9
3 in. Load bearing quality	,,		8	9
4 in. do. do.	,,		10	9
MOLER PARTITION BLOCKS				
2 in. 150 yds.	,,		11	3
2½ in. 120 yds.	,,		14	0
3 in. 100 yds.	,,		15	0
4 in. 90 yds.	,,		17	0
LIGHTWEIGHT CONCRETE BUILDING AND PARTITION BLOCKS OF VARIOUS SOURCES OF MANUFACTURE				
2 in. 100 yds.	per yd. sup.		5	4
2½ in. 80 yds.	,,		6	5
3 in. 65 yds.	,,		7	5
4 in. 50 yds.	,,		9	4
4½ in. 44 yds.	,,		10	2
6 in. 33 yds.	,,		13	5
THERMALITE-YTONG PARTITION BLOCKS				
2½ in. 144 yds.	,,		7	0
THERMALITE-YTONG LOAD-BEARING INSULATING BLOCKS				
3 in. 120 yds.	per yd. sup.		8	5
4 in. 90 yds.	,,		11	0
5 in. 72 yds.	,,		13	9
6 in. 60 yds.	,,		16	6
8½ in. 42 yds.	,,	1	3	8
FLOOR BLOCKS AND FILLER TILES				
Floor Blocks 12 in. × 12 in. delivered in full lorry-loads:				
3 in.	per 1,000	34	16	0
4 in.	,,	37	8	0
5 in.	,,	44	17	0
6 in.	,,	51	4	0
7 in.	,,	62	18	0
8 in.	,,	73	11	0
9 in.	,,	81	0	0
10 in.	,,	89	15	0
Filler Tiles in multiples of 10 tiles per 1,000 multiples:				
12 in. × 3 in. × ¾ in.	,,	42	15	0
12 in. × 4 in. × ¾ in.	,,	73	15	0
10 in. × 5 in. × ¾ in.	,,	73	15	0

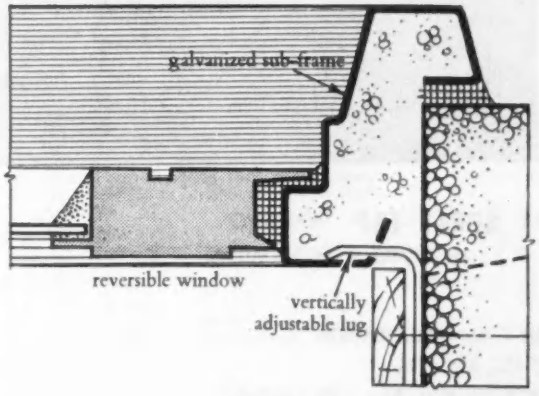
HOPE'S Reversible Windows



WARING HOUSE, REDCLIFF REDEVELOPMENT AREA, BRISTOL

Albert H. Clark, F.R.I.B.A., Bristol City Architect *John Laing & Son Ltd., Building & Civil Engineering Contractors*

1348 Reversible Windows are here ranged in groups of 2 and 3 in galvanized steel sub-frames which start at floor level and contain Georgian wired glass spandrel panels. The detail alongside shows how the sub-frame completely frames and weathers the concrete opening and at the same time absorbs any variation in opening sizes. The casements turn completely through 180° to permit easy cleaning and repainting from inside the flats.



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The Name Guarantees

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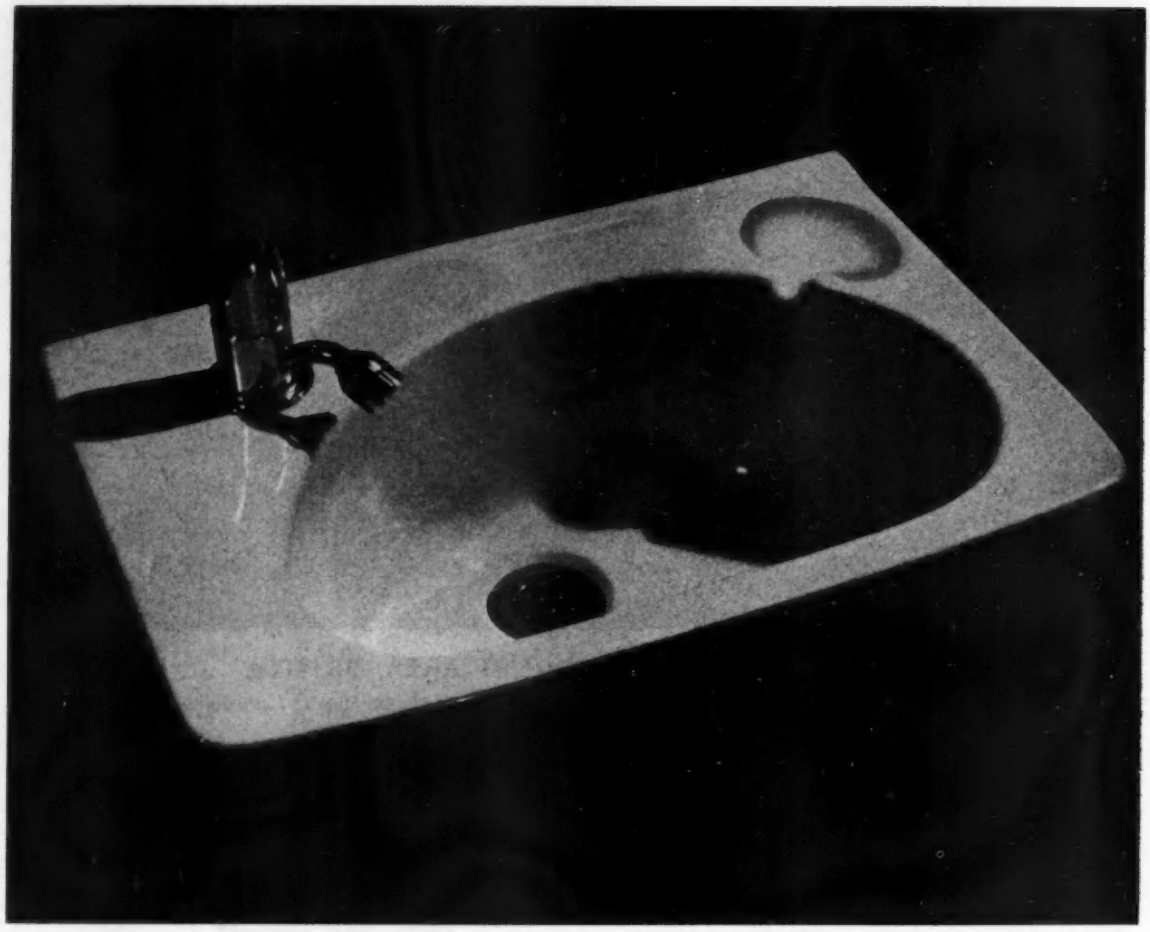
SANITARY FITTINGS
Designed by WALLIS GOSLETT
Registered Design

GOSLETT
OF CHARING CROSS ROAD



FOR **SPRAY TAP** WASHING
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GOSLETT
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CYGNET II 18" x 12"
GLOWITE **VITREOUS CHINA**

FIXING ON WALL HANGERS
OR WITH CENTRAL LEG TO FLOOR

SHOWROOMS :—
127-131 CHARING CROSS RD.
OXFORD STREET END **LONDON W.C.2**
TELEPHONE GERRARD 7890 12 LINES

Nearest Station Tottenham Court Road

J64

STONEWARE DRAIN PIPES, etc.

The following are the percentages to be added to the Revised Standard List (Nov., 1956) prices delivered London Area.

Delivered ex Merchants Wharf or Depot.

	Over 2 tons	Over 100 pieces Under 2 tons	Under 100 pieces Under 2 tons
Best Quality ...	−10%	+5%	+12½%
BSS Best Quality...	+10% −10%	+10% +5%	+10% +12½%
Tested Quality ...	+37½% −10%	+37½% +5%	+37½% +12½%
BSS Tested Quality	+47½% −10%	+47½% +5%	+47½% +12½%

		£	s.	d.
3 in. Land Drain Pipes (in 12 in. lengths)	per 1,000	12	4	0
4 in. do. do.	,,	16	7	0
6 in. do. do.	,,	33	13	0
9 in. do. do.	,,	63	12	0

DAMP COURSE

		£	s.	d.
Hessian base bitumen 7 lb. per yd. sup. in 24 ft. rolls cut to wall widths in lots of £6 value and over delivered London area	per yd. sup.		3	5
Asbestos base do. 7 lb. per yd. sup. do. do.	,,		5	2
Lead lined bitumen do. 9½ lb. per yd. sup. do. do.	,,		12	2
18 in. × 9 in. British damp course slates	per 1,000	43	8	11
14 in. × 9 in. do. do.	,,	32	8	2
9 in. × 9 in. do. do.	,,	18	18	9
18 in. × 4½ in. do. do.	,,	19	19	9
14 in. × 4½ in. do. do.	,,	15	18	3
9 in. × 4½ in. do. do.	,,	10	14	3

STONE

		£	s.	d.
Bath Stone				
Monks Park	per ft. cube		10	3
St. Aldhelm Box Ground	,,		11	6
Delivered in railway trucks at South Lambeth B.R. Western Region.				
Doulting Stone Random Blocks. Delivered London area	,,		10	10
Beer Stone. Delivered London area	,,		10	6
Portland Stone—				
Brown Whitbed in random blocks, 20 ft. average delivered in railway trucks at Nine Elms, B.R. Southern Region	,,		9	10
Yorkshire Stone—Blue Robin Hood Quality. Delivered to site London in 6-ton lots.				
9 in. × 3 in. Rubbed, weathered, throated and stolled cills	per ft. cube	4	5	10
12 in. × 6 in. do. do. do.	,,	3	1	2
12 in. × 3 in. Plain coping, twice throated	,,	2	7	6
12 in. × 3 in. Weathered and twice throated coping	,,	3	3	3
14 in. × 6 in. do. do. do.	,,	2	17	0
4½ in. × 9 in. Plinth rubbed on top and face ...	,,	2	11	0
3 in. sawn two sides Slabs, random sizes ...	per ft. sup.		9	1
Templates and Cover Stones, 3 in., 4 in. and 6 in. thick, edges coped for rendered brickwork ...	per ft. cube	1	11	3
do. do. fair one edge for fair faced brickwork	,,	1	17	0
Hard York—				
12 in. × 2 in. Square Steps, rubbed on top and edge	per ft. run		11	0
14 in. × 3 in. Round-nosed Steps, rubbed on top and front	per ft. cube	2	18	3
12 in. × 6 in. Plain Steps, rubbed top and front	,,	2	11	0
2 in. Rubbed and Jointed Paving, given sizes ...	per ft. sup.		10	3
2 in. Sawn Paving, edges squared, in random sizes	per yd. sup.	3	12	0

TILES AND PANTILES

Delivered London area by road in 6 tons or over per 1,000.

	£	s.	d.
Machine-made Pantiles and French pattern Tiles from Lincolnshire district	29	19	0
Hand-made Pantiles Berkshire district	55	18	0
Hand-made Double Roman Bridgwater district ...	64	4	1
Hand-made 10½ × 6½ tiles Berkshire district	15	18	3
Machine-made 10½ × 6½ Staffordshire district	15	2	6
Hand-made Hip and Valley tiles per doz.	1	11	10
Machine-made Hip and Valley tiles do.	1	10	1
Concrete tiles 10½ × 6½	8	10	0
do. Interlocking (49S)	19	16	6

NOTE.—Breakage in transit, purchasers' responsibility.

SLATES

First-quality Slates from Penrhyn or Portmadoc, carriage paid in full truck loads to London Rate station. Per 1,000 actual.	£	s.	d.
24 × 12	155	10	0
22 × 12	123	10	0
22 × 11	111	10	0
20 × 12	104	10	0
20 × 10	102	0	0
18 × 10	69	10	0
18 × 9	61	0	0
16 × 10	54	8	10
16 × 8	42	12	4

NOTE.—Breakage in transit, purchasers' responsibility.

TIMBER

				£	s.	d.
Softwood						
Joinery quality		Ex Wharf	per standard	£115 to £140		
Carcassing quality		do.	,,	£94 — £98		
1 in. Tongued and Grooved Flooring		do.	,,	£110	0	0
Hardwood						
Mahogany—	African S.E.	do.	per ft. cube	1	10	0
do.	Honduras S.E.	do.	,,	3	5	0
Oak	European S.E.	do.	,,	2	10	0
do.	Japanese S.E.	do.	,,	3	0	0
do.	English Logs sawn ...	do.	,,	2	0	0
Teak	8 in. average S.E. ...	do.	,,	3	17	6
Walnut	African Logs sawn ...	do.	,,	1	2	6

DOORS (in Lots I–II

Delivered London area.

		£	s.	d.
1½ in. 4 Horizontal Panel. Pattern 4 in. deal				
2 ft. 0 in. × 6 ft. 6 in.	each	1	16	0
2 ft. 3 in. × 6 ft. 6 in.	,,	1	17	6
2 ft. 6 in. × 6 ft. 6 in.	,,	1	18	6
2 ft. 9 in. × 6 ft. 6 in.	,,	2	0	6
2 in. do. but top panel open. Pattern 4 × G in deal				
2 ft. 6 in. × 6 ft. 6 in.	,,	2	9	0
2 ft. 9 in. × 6 ft. 6 in.	,,	2	11	6
2 in. 2 Panel top panel open. Pattern 2 × G in deal				
2 ft. 6 in. × 6 ft. 6 in.	,,	2	3	0
2 ft. 9 in. × 6 ft. 6 in.	,,	2	5	0

SUNDRIES

Delivered London area.

		£	s.	d.
1 in. Wood Wool Slabs 6 ft. 0 in. × 2 ft. 0 in. in quantities of 1 ton (89 yds. to 1 ton)	per yd.		6	2
1½ in. do. (67 yds. to 1 ton)	,,		8	0
2 in. do. (52 yds. to 1 ton)	,,		9	9½
2½ in. do. (45 yds. to 1 ton)	,,		11	3
3 in. do. (39 yds. to 1 ton)	,,		12	7½
Quantities under 1 ton add 1d. per ½ in. of thickness.				
¼ in. imported insulation Board, quantities over 5,000 sq. ft.	per 100 sq. ft.	2	2	6
⅛ in. Hardboard do.	,,	1	17	6
3/16 in. do. do.	,,	2	4	6
3/16 in. Asbestos Flat Building Sheets	per yd. sup.		4	3½
¼ in. do. do. do.	,,		6	0
Roofing Felt 1-ply	,,		1	9
do. 2-ply	,,		2	2½
Best Scotch Glue in slabs	per ½ cwt.	5	8	0
do. pearl	,,	5	8	0
Croid Glue	28 lb.	2	6	0
Cut Nails 3 in. (1-ton lots)	per ton	78	10	0
do. 4 in. and up (1-ton lots)	,,	75	0	0
Wire Nails 3 in. (4-cwt. lots)	per cwt.	3	13	5
do. 4 in. and up (4-cwt. lots)	,,	3	12	10

METALS

STEEL JOISTS, ETC.

		£	s.	d.
Basis Joists—				
6 in. × 5 in., 8 in. × 5 in., 8 in. × 6 in., 10 in. × 6 in., 12 in. × 6 in., plain cut to lengths delivered London area	per ton	47	15	0
Extra for sizes				
3 in. × 1½ in. 4 in. × 1¾ in.	,,	3	10	0
3 in. × 3 in.	,,	2	10	0
4 in. × 3 in.	,,	2	5	0
10 in. × 4½ in.	,,	1	10	0
5 in. × 2½ in. 5 in. × 3 in.	,,	1	15	0
4¾ in. × 1¾ in.	,,	3	5	0
5 in. × 4½ in. 7 in. × 3½ in. 13 in. × 5 in. ...	,,		15	0
6 in. × 3 in. 24 in. × 7½ in.	,,	2	0	0
6 in. × 4½ in. 7 in. × 4 in. 8 in. × 4 in. } 9 in. × 4 in. 10 in. × 5 in.	,,	1	5	0
12 in. × 5 in. 22 in. × 7 in.	,,	1	0	0
9 in. × 7 in. 10 in. × 8 in. 12 in. × 8 in. } 14 in. × 5½ in. 14 in. × 6 in. 14 in. × 8 in. } 15 in. × 5 in. 15 in. × 6 in. 16 in. × 6 in. } 16 in. × 8 in. 18 in. × 6 in. 18 in. × 7 in. } 18 in. × 8 in. 20 in. × 6½ in. 20 in. × 7½ in.	,,		10	0
Steel angles average price	,,	48	15	0
Steel tees average price	,,	49	15	0
Fabricated work delivered London—				
R.S. Joists cut and fitted	,,	64	15	0
Compound girders	,,	69	5	0
Stanchions	,,	74	15	0
Compound stanchions	,,	79	5	0
In Roof Work—Trusses and Purlins	,,	89	10	0
Average prices not for awkward work.				
Angle cleats and ⅝ in., ¾ in. and ⅞ in. bolts average price London area	per cwt.	5	10	0

FERRO-CONCRETE BARS

		£	s.	d.
Mild Steel Ferro-Concrete bars British manufacture to BSS785 ex London Stock 1 in. diam., and upwards	per ton	49	10	0
½ in. diam.	per ton extra	8	12	0
7/16 in. do.	,,	6	12	6
⅜ in. do.	,,	4	12	6
⅓ in. do.	,,	3	2	6
¼ in. do.	,,	1	10	0
⅛ in. and ¾ in. diam.	,,		15	0

MILD STEEL TUBES

Tubes to BSS 1387—1957 and Fittings. *Revised* list prices and following discounts :

Galvanised Tube—	Under 1 ton	Over 1 ton	W.I. Fittings	Malleable Fittings
Light	−39½%	−41%	Light −26½%	Malleable List
Medium	−35½%	−37%	Heavy −22½%	−18½%+40%
Heavy	−27½%	−29½%		
Black—				
Light	−50%	−51½%	Light −32½%	Malleable List
Medium	−46%	−47½%	Heavy −28½%	−18½%
Heavy	−38½%	−40%		

C.I. HALF-ROUND GUTTERS

Delivered London per yd. in 6 ft. lengths.

	Gutters	Nozzles	Stop Ends
3 in.	4/0½	3/7	1/–
3½ in.	4/4½	3/11	1/–
4 in.	5/8	4/5	1/7
4½ in.	6/3	4/11	1/10
5 in.	6/11½	5/4	2/2

METALS—*continued*

C.I.O.G. GUTTERS

Per yd. in 6-ft. lengths :	Gutters	Nozzle	Stop Ends
3 in.	5/2½	4/8	1/3
3½ in.	5/10	4/8	1/7
4 in.	6/5	4/11	1/10
4½ in.	6/11½	5/8	2/2
5 in.	7/7½	6/5	2/6

C.I. RAIN-WATER PIPES

	Pipe	Bends	Branches
2 in.	8/7½	4/5	6/4
2½ in.	8/7½	4/11	8/6
3 in.	9/8½	6/2	9/2
3½ in.	11/0½	7/3	11/-
4 in.	12/9	8/9	13/1

L.C.C. COATED SOIL PIPES

2 in.	9/8½	7/7	9/2
2½ in.	10/4	8/5	11/5
3 in.	11/7	9/2	13/7
3½ in.	12/11½	11/5	15/10
4 in.	14/9	12/9	18/8

Above prices for gutters, rain-water and soil pipes for under 5-cwt. lots only. Lots over 5 cwt. see List No. 3300, dated February 1, 1955, plus 25% and tonnage allowance. 4-ton lots 5%, 2-ton lots 2½%.

L.C.C. COATED DRAIN PIPES

In 9-fts.:	cwt.	qt.	lb.	Per yd.	Bends	Branches
4 in.	1	1	17	35/3	23/9	42/-
6 in.	2	0	1	51/7	63/9	101/-

ASBESTOS RAIN-WATER PIPES AND FITTINGS

All less 17½% discount.		2 in.	2½ in.	3 in.	4 in.
Pipes, 6-ft. lengths	per yd.	4/7	4/10½	5/11	7/10
Shoes	each	3/-	3/3	3/10	5/2
Single Branches	"	4/8	5/6	6/7	9/2
Bends, square or obtuse	"	3/3	3/7	4/8	6/7
Swan Necks, 4½ in. proj.	"	3/7	4/8	5/2	7/3
do. 6 in do.	"	3/10	5/2	5/10	7/10

ASBESTOS O.G. GUTTERS AND FITTINGS

		4 in.	4½ in.	5 in.	6 in.
Gutters, 6-ft. lengths	per yd.	4/4	4/9½	5/9	6/10½
Drop ends	each	3/6	4/-	4/9	5/5
Stop ends	"	1/1	1/2	1/3	1/5
Angles	"	3/7	4/1	5/-	5/10
Nozzles	"	3/6	4/-	4/9	5/-
Union Clips	"	1/9	2/1	2/6	2/11

ASBESTOS HALF-ROUND GUTTERS AND FITTINGS

	per	3 in.	4 in.	4½ in.	5 in.	6 in.
Gutters, 6-ft. lengths	yd.	3/0½	3/7½	3/8½	4/4½	6/1
Drop ends	each	2/6	3/-	3/3	3/7	5/2
Stop ends	"	1/-	1/1	1/2	1/3	1/5
Angles	"	2/10	3/3	3/7	3/10	5/2
Nozzles	"	2/6	3/-	3/3	3/7	5/2
Union Clips	"	1/3	1/4	1/5	1/7	2/5

	Per ton basis in London £ s. d.
Iron—Staffordshire Crown Merchant Quality	52 17 6
Mild Steel Bars	47 8 6
Mild Steel Hoops	49 0 0

	Ex Merchant's Stock per ton Two-ton lots £ s. d.
Soft Sheets C.R. and C.A.—	
20 gauge	62 7 6
24 gauge	64 17 6
26 gauge	67 17 6
Galvanised Corrguated Sheets, 6-ft. to 9-ft. —	
20 gauge	70 18 0
24 gauge	74 8 0
26 gauge	79 13 0
Galvanised Flat Sheets C.R. and C.A. :	
20 gauge	72 8 0
24 gauge	75 18 0
26 gauge	81 3 0

ALUMINIUM AND ALUMINIUM ALLOYS

(Base Prices)		£ s. d.
Sheet BS 1740 S1C 18 SWG (36 in. wide)	per lb.	3 0
Sheet BS 1470 NS3 Utility 18 SWG (36 in. wide)	"	2 11
Coiled strip BS 1470 S1C 18 SWG (24 in. wide)	"	2 11
Coiled strip BS 1470 NS3 Utility 18 SWG (24 in. wide)	"	2 10½
Coiled strip for flashing, high purity, 22 SWG (12 in wide)	"	3 1½
Corrugated sheet BS 1470 NS3 Circular Profile 8 ft. × 32 in. × 20 SWG	per sheet	1 13 6
Corrugated sheet BS 1470 NS3 Industrial Profile 8 ft. × 31¾ in. × 20 SWG	"	1 19 3
Corrugated sheet BS 1470 NS3 Mansard Profile 8 ft. × 31¾ in. × 20 SWG	"	1 12 7
Extruded section BS 1476 E1C simple moulding	per lb.	2 10
Extruded section BS 1476 E1C 1 in. diam. round	"	2 7½
Extruded section BS 1476 HE10WP simple angle	"	3 1½
Extruded section BS 1476 HE10WP 1 in. diam. round	"	3 0½
Tubing BS 1471 T1C 1½ in. O/D × 20 SWG	"	6 6½
Tubing BS 1471 HT19WP 1½ in. O/D × 20 SWG	"	4 0½

PLUMBERS' BRASS WORK, etc.

Delivered in London area.

All per dozen	M.O.H. ½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
Screwdown bib cocks Crutch head for iron	87/-	128/-	—	—	—	—
Toilet bib cocks for iron	109/-	158/5	—	—	—	—
Screwdown stop cocks for iron	66/-	95/9	188/-	363/-	522/6	917/6
do. with two unions for lead	89/-	132/-	234/4	472/-	623/6	1,389/6
Double nut boiler screws	18/8	26/5	47/6	48/6	67/-	93/6
Heavy Croydon ball valves	77/-	193/6	312/5	568/8	734/10	—
Plumbers' union brass lead to iron	19/6	23/6	38/6	52/10	70/6	165/-
	1½ in.	1½ in.	2 in.	3 in.	3½ in.	4 in.
Caps and Screws	33/-	40/8	59/6	92/5	118/10	155/3
Brass Sleeves	—	31/11	31/11	56/2	74/10	91/5
	1½ × 6 lb.	1½ × 6 lb.	2 × 7 lb.	3 × 7 lb.		
Lead P. trap with brass cleaning screws	68/6	85/6	137/-	233/9		
Lead S. trap do. do.	82/9	102/9	168/3	302/3		

Solder :			s.	d.
Plumbers'	1 cwt. lots	320/-	14 lb. lots per lb.	3 7
Tinmen's	" "	404/-	" " "	4 5
Blow pipe	" "	407/-	" " "	4 6

COPPER TUBES AND SHEETS

Copper tubes BSS 659/1944 on the basic price of 27⅞d. per lb. plus gauge and manufacturing extras as follows. Minimum quantities, 10 cwt.

	Extra d.		d.		d.
⅛ in. × 19 gauge	15½	Total per lb.	43½	Approx. per ft.	11¾
¼ in. × 19 "	13¾	" "	41⅞	" "	16¼
1 in. × 18 "	12¼	" "	39⅞	" "	24¾
1¼ in. × 18 "	11⅞	" "	39½	" "	29¾
1½ in. × 18 "	11⅞	" "	39½	" "	35⅞
2 in. × 17 "	13¼	" "	40¼	" "	57¼

Small Quantity extras :—

10 cwts. to 5 cwts.	plus ½d. per lb.
5 cwts. to 2 cwts.	" 1d. "
2 cwts. to 1 cwt.	" 2d. "

	£ s. d.
Rolled Copper sheets up to 48 in. wide, basic price plus gauge and manufacturing extras	270 0 0

ZINC

		£ s. d.
Sheet Zinc, 10 gauge (25 SWG), 5 cwt. lots upwards	per cwt.	7 15 3
" " 12 gauge (23 SWG), " " "	"	7 14 9
" " 14 gauge (21 SWG), " " "	"	7 13 6

BRASS TUBES

Brass tubes, basic price, plus gauge and manufacturing extras	per lb.	1 10½

LEAD SHEETS AND PIPES

Basis selling price to one address in London or Home Counties :

		£ s. d.
Lead Sheet, English, 3½ lb. substance and upwards	per ton	109 0 0
" Water Pipe, in coils	"	111 5 0
Lead Soil Pipe, 10 ft. or over 2 in. to 4 in. in dia.	"	112 15 0
" " " over 4 in. dia.	"	114 15 0
" Gas or Untinned Compo pipe	"	112 15 0

5 cwt. lots and over less 6d. per cwt. off basic prices.

Extras over Basis for quantities under 5 cwt.:

3 cwt. and under 5 cwt.	per cwt.	4 0
1 cwt. do. 3 cwt.	"	6 0

Smaller quantities than 1 cwt. priced specially.

Supplying sheet lead and lead pipe to less than basis weights and cutting to sizes less than basis charged extra according to current trade schedule.

Allowance for Old Lead, collected, £63 0s. 0d. per ton weighed at buyer's works.

PLASTER, etc.

		£ s. d.
Coarse Pink in 1-ton loads and over delivered on site	per ton	8 4 6
do. White do. do. do.	"	8 14 0
Sirapite Coarse BSS 1191 Class C do.	"	8 15 9
do. Fine do. do. do.	"	9 3 3
do. Browning BSS 1191 Class B do.	"	8 15 9
do. Board Finish do. do.	"	8 15 9
Blue Lias Lime, in 6-ton loads	"	6 14 6
Hydrated Lime (Grey), in 6-ton loads	"	5 10 0
do. (White) do.	"	6 0 0
Lump Lime (Grey) do.	"	5 7 0
do. (White) do.	"	5 14 6
White Keen's or Parian Cement, in 1-ton loads	"	11 19 3
Pink Keen's or Parian Cement, in 1-ton loads	"	11 14 0
Granite Chips, in 6-ton loads	"	2 5 3
Hair	per cwt.	4 17 6
Gypsum Plaster Lath or Base Board, ⅜ in. thick, 600 yds. and over in one delivery. Delivered site	per yd.	2 3½
1,200 yds.	"	2 2½
do. Insulating do. ⅜ in. thick, 600 yds. and over in one delivery. Delivered site	"	2 9
1,200 yds.	"	2 9
Gypsum Plaster Wall Boards, 3 and 4 ft. wide 6 to 12 ft., ⅜ in. thick, 600 yds, and over in one delivery. Delivered site	"	2 6½
1,200 yds.	"	2 5½
do. Insulating do. ⅜ in. thick, 600 yds. and over in one delivery. Delivered site	"	3 0
1,200 yds.	"	3 0

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Architects: Kenneth Wakeford, Jerram and Harris

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PAINTS AND DISTEMPER

Delivered London area.		£	s.	d.
Ceiling Distemper	per cwt.	1	7	6
Washable Distemper	,,	5	15	0
Gloss Paint	per gal.	2	16	0
Super Snowcem cement paint (in 1 cwt. drums) ...	per cwt.	4	0	0
LEAD PRODUCTS AND OILS				
Ground White Lead, in 1 cwt. kegs	per cwt.	8	7	6
Genuine White Lead Paint, 1-19 gal. lots in 1 gal. tins	per gal.	3	6	6
Genuine Red Lead, Dry, 1 cwt. keg (10 ton lots)	per cwt.	5	12	6
do. do. do. (1 cwt. lots)	,,	6	19	0
Genuine Linseed Oil Putty, 1 cwt. keg	,,	2	13	6
Size XD quality 28 lb.	per tin		9	0
Raw Linseed Oil (5 gal.) drums extra	per gal.		19	2
Boiled Linseed Oil (5 gal.) do.	,,		20	0
SUNDRIES				
Turpentine substitute (5 gal.) drums extra	,,		5	4½
do. do. (40 gal.) do.	,,		4	8½
Solignum, Brown (5 gal. cans) Exterior	,,		8	8
Creosote (40 gal. barrels)	,,		2	3
Paste Powder (1 lb. packets)	per lb.		2	4
White Lining Paper	per piece		1	2

VARNISHES, etc.

Delivered London area.		£	s.	d.
Oak Varnish, Outside or Inside	per gal.	2	0	0
Oal Pale Copal do. do.	,,	2	0	0
Hard Drying Oak for Inside	,,	2	5	0
Crystal Paper Varnish do.	,,	2	8	0
Eggshell Flat Varnish do.	,,	2	2	0
Finest Carriage Varnish	,,	2	7	0
Front Door Varnish	,,	2	4	0
Japan Gold Size	,,	1	12	0
Black Japan	,,	1	16	0
Brunswick Black	,,	1	12	0
Berlin Black	,,	1	10	0
Terebene	,,	1	12	0
Knotting (1 gal. bottles free)	,,	1	15	0
French and Brush Polish (do.)	,,	1	15	0

GLASS

Delivered London area.		s.	d.
18 oz. Sheet Glass Ordinary Glazing Quality— Cut Sizes	per ft. sup.		9½
24 oz. do. do. do. do.	,,		11½
26 oz. do. do. do. do.	,,	1	2½
32 oz. do. do. do. do.	,,	1	6½
¼ in. Rolled Plate	,,	1	2½
7/16 in. Rolled and Rough Cast	,,	1	5
½ in. do. do.	,,	1	5½
¼ in. Figured Rolled and Cathedral, Standard patterns—			
White Group 1	per ft. sup.	1	2½
do. Group 2	,,	1	8½
do. Standard Tints	,,	2	1½
do. Special Tints	,,	7	3
¼ in. Pinstripe, Hammerstripe, Reeded, Reedlyte and Luminating Group 3	,,	1	7½
¼ in. Wired Cast	,,	1	9½
¼ in. Georgian Wired Cast	,,	1	9½
Hollow Glass Blocks—			
P.B.2 Cross reeded 5¾ × 5¾ × 3⅞ in. ...	each	3	6
P.B.3 Broad reeded 7¾ × 7¾ × 3⅞ in. ...	,,	5	4
P.B.32 Cross reeded 7¾ × 7¾ × 3⅞ in. ...	,,	5	4
P.B.4 Prismatic 7¾ × 7¾ × 3⅞ in. ...	,,	6	0
P.B.5 Flemish 7¾ × 7¾ × 3⅞ in. ...	,,	5	4
P.B.6 Boomerang 7¾ × 7¾ × 3⅞ in. ...	,,	6	0
Half Size Blocks—			
P.B.32 Cross reeded 7¾ × 3¾ × 3⅞ in. ...	,,	4	6
Radiused Corner Blocks to match up with—			
P.B.2 Cross reeded	,,	7	6
P.B.3 Broad reeded	,,	9	0
P.B.32 Cross reeded	,,	9	0
P.B.2, P.B.3, P.B.32 are also supplied in Light Diffusing Blocks at same price.			
¼ in. Polished Plate Glass, G.G. quality—			
In plates not exceeding 2 ft. sup.	per ft. sup.	4	7
,, ,, ,, 5 ft. sup.	,,	5	7
,, ,, ,, 45 ft. sup.	,,	6	9
,, ,, ,, 100 ft. sup.	,,	7	4
¼ in. Polished Plate, extra sizes, *i.e.*, plates exceeding 100 ft. sup. or 160 in. one way or 96 in. both ways. G.G. quality—Not exceeding 135 ft. sup. or 240 in. one way or 130 in. both ways ...	,,	10	9
Not exceeding 180 ft. sup. or do.	,,	14	3

Plates exceeding 180 ft. sup. prices on application.
Substances other than ¼ in. Polished Plate at Special Prices.
Quantity Tariff—Sheet and Sundry Glass.

The following prices apply to minimum quantities of one size and one pattern delivered by the manufacturer to one site at one time.

Description of Glass	Minimum quantity	per ft. sup. s.	d.
18 oz. sheet O.Q.	3,000		6¾
24 oz. ,, ,, ...	2,000		8¾
26 oz. ,, ,, ...	2,000		11
32 oz. ,, ,, ...	2,000	1	2¼
¼ in. Rolled Plate	1,000		10½
¼ in. Figured Rolled and Cathedral Standard Patterns, White Group 1	1,000		10½
do. Group 2	1,000	1	2
¼ in. Pinstripe, Hammerstripe, Reeded, Luminating and Spotlyte Group 3	1,000	1	2
7/16 in. Rolled Plate or Rough Cast	2,000	1	1
½ in. do. do.	2,000	1	1½
¼ in. Wired Cast, Hexagonal	2,000	1	4½
¼ in. Georgian Wired Cast	2,000	1	4½

THE BUILDER RATES OF WAGES

AS FROM APRIL 18, 1960. **(Every endeavour is made to ensure accuracy but we cannot be responsible for errors.)**

KEY TO SCHEDULE OF GRADE RATES.

Grade Classification	A	A1
Craftsmen	4/11½	4/11
Labourers	4/4	4/3½

Town	*Grade*
Aberavon	A
Aberdare	A
Abergavenny	A
Abingdon	A1
Accrington	A
Addlestone	A
Afan Valley	A
Aldeburgh	A1
Aldershot District	A1
Alfreton UD	A
Alnwick UD	A
Altrincham	A
Amble	A
Ambleside	A
Amersham	A
Ammanford	A
Andover	A1
Anglesey, Isle of	A
Ardingly	A1
Arundel	A1
Ascot	A1
Ashbourne RD	A1
Ashbourne UD	A1
Ashby-de-la-Zouch UD	A
Ashby Woulds UD	A
Ashford (Kent)	A1
Ashford (Middlesex)	A
Ashington UD	A
Ashtead	A
Ashton-under-Lyne	A
Aspatria and Brayton	A
Atherstone RD	A
Attleborough	A1
Axminster	A1
Aylesbury	A1
Aylsham	A1
Bagshot	A1
Bakewell UD	A1
Banbury	A1
Bangor	A
Barnard Castle UD	A
Barnoldswick UD	A
Barnsley CB	A
Barnstaple	A1
Barrow-in-Furness	A
Barrow-upon-Soar RD (part Thrussington)	A1
Barry	A
Basford RD (ex. Willough-by-on-the-Wolds A1)	A
Basingstoke	A1
Bath	A
Batley MB	A
Baxterley	A1
Beaconsfield District	A
Bearl	A
Beccles	A1
Bedale RD	A
Bedford	A
Bedlington	A
Bedlingtonshire UD	A
Bedwas	A
Beeston & Stapleford UD	A
Belper UD	A
Belton	A
Berkhamsted	A
Berrington	A
Berwick Borough	A
Beverley MB	A
Bewdley MB	A
Bexhill-on-Sea	A1
Bideford	A1
Biggleswade	A1
Billericay	A
Billing	A
Billingham UD	A
Bilsthorpe	A
Bilston MB	A
Birchington	A1
Birkenhead	*
Birmingham CB	†A
Bishop Auckland UD	A
Bishop's Stortford	A
Bishops Castle MB	A1
Bispham	A
Blackburn	A
Blackpool	A
Blackwell RD	A
Blandford	A1
Blaydon UD	A
Blidworth	A
Blyth B.	A
Bodmin	A1
Bognor Regis	A1
Boldon UD	A
Bolsover UD	A
Bolton	A
Boston MB	A
Bourne End	A
Bournemouth District	A
Brackley MB	A1
Bracknell	A1
Bradford CB	A
Bradford-on-Avon	A1
Braintree	A1
Brandon & Byshottles UD	A
Brecon, Borough of	A1
Breconshire, County of	‡A1
Brent Knoll	A1
Brentwood	A
Bridgend	A
Bridlington MB	A
Bridlington RD	A
Bridgnorth MB	A
Bridgnorth RD	A1
Bridgwater	A1
Brierfield	A
Brighouse MB	A
Brighton & Hove	A
Bristol District	A
Broadstairs	A1
Bromsgrove UD	A
Broughton, Flint	A
Buckfastleigh	A1
Buckingham	A1
Buckley	A
Bungay	A1
Burnham-on-Crouch	A1
Burnham-on-Sea	A1
Burnley	A
Burton-on-Trent CB	A
Bury	A
Bury St. Edmunds	A1
Buxton	A
Byfleet	A1
Caernarvon	A
Caernarvonshire, Cnty. of	‡A
Calder Valley	A
Camberley District	A1
Cambridge	A
Cannock UD	A
Canterbury	A1
Cardiff	A
Cardiganshire, Cnty. of	‡A1
Carlisle	A

CURRENT RATES OF WAGES—Continued

Town	Grade
Carlton UD	A
Carmarthen—Borough of	A
Carmarthenshire, Cnty. of	A
Carnforth	A
Castleford UD	A
Caterham	A
Chapel-en-le-Frith	A
Chard	A1
Charmy Down	A
Chatham District	A
Chatteris	A1
Cheadle (Staffs) RD	A
Chelmsford	A
Cheltenham	A
Chepstow	A
Chertsey	A
Chester	A
Chester-le-Street UD	A
Chesterfield MB	A
Chesterfield RD	A
Chichester	A1
Chipping Norton	A1
Chipping Sodbury	A1
Chippenham (inc. Chippenham Within and Hardenhuish)	A1
Chorley	A
Cirencester	A1
Clacton	A1
Clay Cross UD	A
Cleethorpes MB	A
Clevedon	A1
Cleveleys	A
Clitheroe	A
Coalville UD	A
Cobham (Surrey)	A
Colchester	A
Colne	A
Colwyn Bay	A
Congleton	A
Consett UD	A
Conway	A
Corby UD	A
Cornwall, County of	‡A1
Corsham District	A
Coventry CB	A
Cranbrook	A1
Cranleigh	A1
Cranwell Aerodrome Site	A
Crawley	A
Crewe	A
Crewkerne	A1
Cromer	A1
Crook and Willington UD	A
Crowborough	A1
Cuckfield	A1
Cwmbran	A
Dalton-in-Furness	A
Darlington CB	A
Dartmouth	A1
Darwen	A
Daventry MB	A
Deal	A1
Denbigh Town	A
Derby CB	A
Devizes	A1
Devon, County of	‡A1
Dewsbury CB	A
Didcot	A1
Diss	A1
Doncaster CB	A
Dorchester	A1
Dorking	A
Dorset, County of	A1
Dover	A1
Dovercourt	A
Driffield UD	A1
Drigg & Carleton	A
Droitwich MB	A
Dudley CB	A
Dunstable	A
Durham B	A
Eastbourne	A
E. Glam. & Mon. Val.	A
East Grinstead District	A1
East Kesteven RD	A1
East Retford MB	A
Eastwood (Notts) UD	A
Ebbw Vale & District	A
Edenbridge	A1
Ely	A1
Epping	A
Evesham MB	A1
Exeter	A
Exmouth	A1
Fakenham	A1
Falmouth	A1
Fareham	A
Faversham	A1
Felixstowe	A1
Filey UD	A
Fleetwood	A
Flint MB	A
Folkestone	A1
Frinton	A1
Frome	A1
Gainsborough UD	A
Gateshead CB	A
Gillingham (Dorset)	A1
Gillingham (Kent)	A
Glastonbury & Street	A1
Glossop	A
Gloucester	A
Gloucestershire, Cnty. of	‡A1
Godalming	A1
Goole, MB	A
Goole RD	A
Gosport	A
Grantham MB	A
Gravesend	A
Great Yarmouth	A
Grimsby CB	A
Grimsby RD (part)	A1
Guildford District	A1
Halesowen MB	A
Halifax CB	A
Halstead	A1
Haresfield	A1
Harlow	A
Harpenden	A
Harrogate MB	A
Hartlepool B	A
Harwell	A1
Harwich	A
Haslemere	A1
Hastings	A1
Hatfield (Herts)	A
Havant	A
Haywards Heath	A1
Heanor UD	A
Hemel Hempstead	A
Henley-on-Thames	A1
Hereford	A1
Herefordshire, Cnty. of	‡A1
Herne Bay	A1
Hertford	A
Hexham RD	A
Hexham UD	A
Heysham	A
Heywood	A
Higham Ferrers MB	A
High Wycombe	A
Hinckley UD	A
Hitchin	A
Hoddesdon	A
Holywell	A
Horley	A1
Horncastle UD	A1
Horsham	A1
Horwich	A
Huddersfield CB	A
Hull	A
Hunstanton	A1
Huntington (Staffs)	A
Ilfracombe	A1
Ilkeston MB	A
Ilkley UD	A
Ipswich	A
Isle of Sheppey	A1
Isle of Thanet	A1
Isle of Wight	A1
Jarrow B.	A
Keighley MB	A
Kendal	A
Kenilworth UD	A
Kettering MB	A
Keynsham	A
Kidderminster MB	A
Kingskerswell	A1
King's Lynn	A1
Kingsteignton	A1
Kirkham	A
Knaresborough UD	A
Knutsford	A
Lancaster	A
Leamington MB	A
Leatherhead	A
Leeds CB	A
Leek UD	A
Leicester CB	A
Leighton Buzzard	A1
Leiston	A1
Leominster	A1
Letchworth	A
Lewes	A1
Lichfield MB	A
Lincoln CB	A
Liskeard	A1
Littlehampton	A1
Liverpool	*
Llandudno	A
Llanelly (inc. Llanelly RD)	A
Llanfairechan	A
Llangollen	A
London	*
Long Eaton	A
Looe	A1
Loughborough MB	A
Louth MB	A1
Lowestoft	A
Loxton	A1
Ludlow MB	A1
Ludlow RD	A1
Luton	A
Lyme Regis	A1
Lyneham (Devon)	A1
Lytham	A
Macclesfield	A
Maidenhead	A
Maidstone	A
Maldon (Essex)	A1
Maltby UD	A
Malton UD	A1
Malvern UD	A
Manchester	A
Manningtree	A1
Mansfield MB	A
March	A1
Margate	A1
Market Harborough RD	A1
Market Harborough UD	A
Market Rasen UD	A1
Martock	A1
Maryport	A
Matlock UD	A
Melksham	A1
Melton Mowbray UD	A
Merionethshire	A
Merthyr	A
Mexborough UD	A
Middlesbrough CB	A
Middleton	A
Middlewich	A
Mildenhall	A1
Milford Haven UD	A1
Minehead	A1
Monmouth—Borough of	A
Monmouthshire	A
Morecambe	A
Moreton Valence	A1
Morley	A
Morpeth B	A
Morpeth RD	A
Mundesley	A1
Nantwich	A
Neath & Valley	A
Nelson	A
Newark MB	A
Newbury	A1
Newcastle-upon-Tyne CB	A
Newcastle-under-Lyme	A
New Forest District	A1
Newmarket	A1
Newport, Mon.	A
Newport Pagnell	A1
Newquay	A1
Newton Abbott	A1
Normanton UD	A
Northallerton District	A
Northallerton UD	A
Northampton CB	A
North Shields	A
North Walsham	A1
Northwich	A
Norton Radstock	A1
Norwich	A
Nottingham CB	A
Nuneaton MB	A
Oakham RD	A1
Oakham UD	A1
Okehampton	A1
Oldham	A
Ongar	A
Ormskirk	A
Ossett & Horbury	A
Oswestry	A
Oundle UD	A1
Oxford	A
Oxted	A1
Padstow	A1
Paignton	A1
Par	A1
Pembrokeshire	A
Penmaenmawr	A
Penrith UD	A
Penzance	A1
Peterborough, Soke of (Eastern Regional portion)	A1
Petersfield	A1
Pickering	A
Plymouth	A
Pontefract MB	A
Pontypool & District	A
Pontypridd District	A
Porthcawl	A
Portishead	A
Portland Bill	A1
Portsmouth	A
Port Talbot	A
Preston	A
Princetown	A1
Pudsey MB	A
Pulborough	A1
Radnorshire, County of	‡A1
Ramsgate	A1
Raunds UD	A
Rayleigh	A
Reading	A
Redcar B	A
Redditch UD	A
Redhill & Reigate	A
Rhondda Valley	A
Richmond B (Yorks.)	A
Ripon MB	A
Rochdale	A
Rochester	A
Ross-on-Wye	A1
Rossendale Valley	A
Rotherham CB	A
Royston	A1
Rugby MB	A
Rugeley UD	A1
Rushden UD	A
Saffron Walden	A1
St. Albans	A
St. Austell	A1
St. Helens	A
St. Neots	A1
Salisbury City	A1
Salisbury Plain	A1
Sandy	A1
Sawbridgeworth	A
Saxmundham	A1
Scarborough MB	A
Scunthorpe MB	A
Seaford & Newhaven	A1
Selby UD	A
Sevenoaks	A
Shaftesbury	A1
Sheerness	A1
Sheffield MB	A
Shepton Mallet	A1
Sherborne	A1
Shipley	A
Shoeburyness	A
Shoreham	A
Shrewsbury MB	A
Sirhowy Valleys	A
Sittingbourne	A1
Skegness UD	A1
Skipton UD	A
Sleaford UD	A
Slough, Windsor & Eton District	A
Smethwick CB	†A
Smettisham	A1
Solihull B	A
Somerset, County of	‡A1
Southampton & Eastleigh	A
Southend-on-Sea District	A
Southport	A
South Shields CB	A
Southwold	A1
Spalding UD	A1
Stafford MB	A
Staines	A
Stamford MB	A
Stantonwick	A
Stevenage	A
Stockport	A
Stockton RD	A
Stockton-on-Tees B	A
Stoke-on-Trent CB	A
Stoke Orchard	A1
Stourbridge MB	A
Stouport UD	A
Stowmarket	A1
Stratford-on-Avon MB	A
Stroud (RD Area)	A1
Sunderland CB	A
Sunningdale	A1
Sutton Coldfield MB	A
Swadlincote UD	A
Swaffham	A1
Swanage District	A1
Swansea	A
Swindon District	A
Swinton UD	A
Tamworth MB	A
Taunton	A1
Tavistock	A1
Tenterden	A1
Teignmouth	A1
Tewkesbury	A1
Thames Haven	A
Thetford	A1
Thirsk RD	A
Thorpe Bay	A
Thurrock UDC (including Tilbury, Grays and the area north to Billericay)	A
Todmorden MB	A
Tonbridge	A1
Torquay	A1
Totnes	A1
Tring	A1
Trowbridge	A1
Truro	A1
Tunbridge Wells	A1
Tynemouth CB	A
Ulverston	A
Uppington (Salop)	A1
Uttoxeter RD	A1
Uttoxeter UD	A1
Wakefield CB	A
Wakefield RD	A
Walsall CB	A
Wallsend B	A
Walsden	A
Walton-on-Naze	A1
Ware	A
Warminster	A1
Warrington	A
Warwick MB	A
Wednesbury MB	A
Wellingborough UD	A
Wellington UD	A
Wellington (Somerset)	A1
Wells (Norfolk)	A1
Wells (Somerset)	A1
Welwyn	A
Welwyn Garden City	A
West Bromwich CB	A
Westbury	A1
Westcliff-on-Sea	A
Westerham	A1
West Hartlepool CB	A
Westmorland	A
Weston-super-Mare	A1
Weybridge	A
Weymouth (incl. Portland Bill, excl. Portland Stoneyards)	A1
Whitby UD	A1
Whitby RD	A1
Whitehaven	A
Whitley & Monkseaton UD	A
Whitstable & District	A1
Wickford	A
Widnes	A
Wigan	A
Wigton	A
Wilmslow	A
Wiltshire, County of	‡A1
Wimborne	A1
Wincanton	A1
Winchester	A1
Windermere	A
Wisbech	A1
Witham	A1
Withernsea UD	A
Woking	A1
Wokingham	A1
Wolverhampton CB	A
Wolverton District	A1
Woodbridge	A1
Woodhall Spa UD	A1
Woodstock	A1
Worcester CB	A
Workington	A
Worksop MB	A
Worthing	A1
Wrexham (incl. Cefn)	A
Wroughton	A1
Wylam	A
Wymondham	A1
Yate	A1
Yeovil Borough	A1
York CB	A
Ystalyfera	A

* For Birkenhead, Liverpool and London the rates are :—Craftsmen, 5s. 1d. ; Labourers, 4s. 5½d. In the case of London the rate beyond the 12-mile radius is : Craftsmen, 5s. 0½d. ; Labourers, 4s. 5d. † Plus 4d. per working day. ‡ This is the County rate and applies except where higher grades are stated.

NOTE.—Carpenters and Joiners providing own tools when employed in establishments operating under the Supplementary Rules for Woodworking Factories and Shops receive 2d. per day ; when employed on other building industry work, 4d. per day.

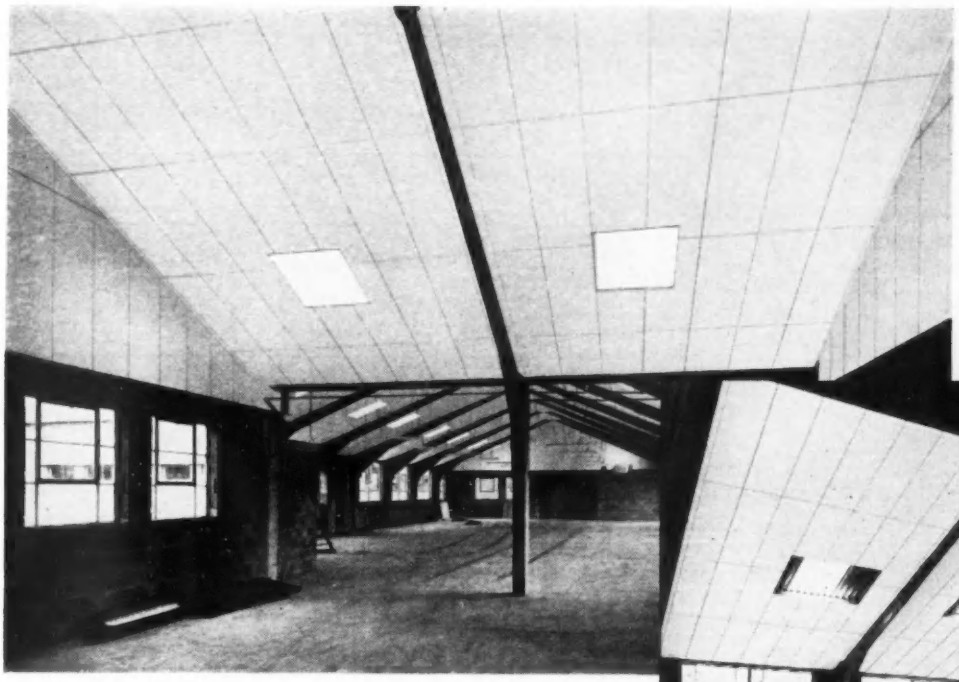
WOMEN'S RATES.—In all districts throughout the country the rate of wages for women engaged in craft processes is 4s. 1d. per hour. Women engaged on work other than craft processes, 3s. 9d. per hour.

For Building Trade Wages in Scotland, see page 636

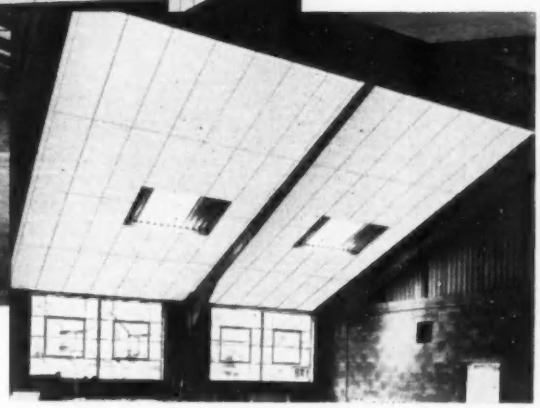
Efficient insulation with **MARLEYcel** *

- **U value** *=0.18 with ¾" Marleycel self-extinguishing grade*
- **Lower installed cost** *than any comparable alternative*
- **Greater light reflection** *improves working conditions*
- **Quick removal of individual panels with Grecon** *facilitates inspection of ceilings and roofs*
- **Speedier erection** *reduces loss of production time*

Marleycel is quickly fixed using the new GRECON Fixing System



The standard system comprises 9' lengths of T-section galvanised steel, spring steel clips, steel hangers and sleeves. This method of fixing ensures the quick removal of individual panels.



Photography by courtesy of E. W. Tyler & Co. Ltd, Tonbridge. Marleycel installed using the Grecon Fixing System for R. Hewett Ltd, Building Contractors, Boyn Valley Trading Estate, Maidenhead.
The partially insulated roof in the smaller photograph illustrates the improved appearance and light reflection.

Marley Technical Staff will always advise on installation procedures including the Grecon Fixing System, and on the appropriate Marleycel thickness.

*
Marleycel Expanded Polystyrene

A pure white insulating material of moulded cellular structure, supplied in featherweight sheet form. Manufactured by Shell and developed by Marley to serve the building industry.

MARLEY SEVENOAKS · KENT Sevenoaks 55255 *London Showrooms: 251 Tottenham Court Road, W1*

CURRENT RATES OF WAGES—Continued

Town	Grade
Carlton UD	A
Carmarthen—Borough of	A
Carmarthenshire, Cnty. of	A
Carnforth	A
Castleford UD	A
Caterham	A
Chapel-en-le-Frith	A
Chard	A1
Charmy Down	A
Chatham District	A
Chatteris	A1
Cheadle (Staffs) RD	A
Chelmsford	A
Cheltenham	A
Chepstow	A
Chertsey	A
Chester	A
Chester-le-Street UD	A
Chesterfield MB	A
Chesterfield RD	A
Chichester	A1
Chipping Norton	A1
Chipping Sodbury	A1
Chippenham (inc. Chippenham Within and Hardenhuish)	A1
Chorley	A
Cirencester	A1
Clacton	A1
Clay Cross UD	A
Cleethorpes MB	A
Clevedon	A1
Cleveleys	A
Clitheroe	A
Coalville UD	A
Cobham (Surrey)	A
Colchester	A
Colne	A
Colwyn Bay	A
Congleton	A
Consett UD	A
Conway	A
Corby UD	A
Cornwall, County of	‡A1
Corsham District	A
Coventry CB	A
Cranbrook	A1
Cranleigh	A1
Cranwell Aerodrome Site	A
Crawley	A
Crewe	A
Crewkerne	A1
Cromer	A1
Crook and Willington UD	A
Crowborough	A1
Cuckfield	A1
Cwmbran	A
Dalton-in-Furness	A
Darlington CB	A
Dartmouth	A1
Darwen	A
Daventry MB	A
Deal	A1
Denbigh Town	A
Derby CB	A
Devizes	A1
Devon, County of	‡A1
Dewsbury CB	A
Didcot	A1
Diss	A1
Doncaster CB	A
Dorchester	A1
Dorking	A
Dorset, County of	A1
Dover	A1
Dovercourt	A
Driffield UD	A1
Drigg & Carleton	A
Droitwich MB	A
Dudley CB	A
Dunstable	A
Durham B	A
Eastbourne	A
E. Glam. & Mon. Val.	A
East Grinstead District	A1
East Kesteven RD	A1
East Retford MB	A
Eastwood (Notts) UD	A
Ebbw Vale & District	A
Edenbridge	A1
Ely	A1
Epping	A
Evesham MB	A1
Exeter	A
Exmouth	A1
Fakenham	A1
Falmouth	A1
Fareham	A
Faversham	A1
Felixstowe	A1
Filey UD	A
Fleetwood	A
Flint MB	A
Folkestone	A1
Frinton	A1
Frome	A1
Gainsborough UD	A
Gateshead CB	A
Gillingham (Dorset)	A1
Gillingham (Kent)	A
Glastonbury & Street	A1
Glossop	A
Gloucester	A
Gloucestershire, Cnty. of	‡A1
Godalming	A1
Goole, MB	A
Goole RD	A
Gosport	A
Grantham MB	A
Gravesend	A
Great Yarmouth	A
Grimsby CB	A
Grimsby RD (part)	A1
Guildford District	A1
Halesowen MB	A
Halifax CB	A
Halstead	A1
Haresfield	A1
Harlow	A
Harpenden	A
Harrogate MB	A
Hartlepool B	A
Harwell	A1
Harwich	A
Haslemere	A1
Hastings	A1
Hatfield (Herts)	A
Havant	A
Haywards Heath	A1
Heanor UD	A
Hemel Hempstead	A
Henley-on-Thames	A1
Hereford	A1
Herefordshire, Cnty. of	‡A1
Herne Bay	A1
Hertford	A
Hexham RD	A
Hexham UD	A
Heysham	A
Heywood	A
Higham Ferrers MB	A
High Wycombe	A
Hinckley UD	A
Hitchin	A
Hoddesdon	A
Holywell	A
Horley	A1
Horncastle UD	A1
Horsham	A1
Horwich	A
Huddersfield CB	A
Hull	A
Hunstanton	A1
Huntington (Staffs)	A
Ilfracombe	A1
Ilkeston MB	A
Ilkley UD	A
Ipswich	A
Isle of Sheppey	A1
Isle of Thanet	A1
Isle of Wight	A1
Jarrow B.	A
Keighley MB	A
Kendal	A
Kenilworth UD	A
Kettering MB	A
Keynsham	A
Kidderminster MB	A
Kingskerswell	A1
King's Lynn	A1
Kingsteignton	A1
Kirkham	A
Knaresborough UD	A
Knutsford	A
Lancaster	A
Leamington MB	A
Leatherhead	A
Leeds CB	A
Leek UD	A
Leicester CB	A
Leighton Buzzard	A1
Leiston	A1
Leominster	A1
Letchworth	A
Lewes	A1
Lichfield MB	A
Lincoln CB	A
Liskeard	A1
Littlehampton	A1
Liverpool	*
Llandudno	A
Llanelly (inc. Llanelly RD)	A
Llanfairechan	A
Llangollen	A
London	*
Long Eaton	A
Looe	A1
Loughborough MB	A
Louth MB	A1
Lowestoft	A
Loxton	A1
Ludlow MB	A1
Ludlow RD	A1
Luton	A
Lyme Regis	A1
Lyneham (Devon)	A1
Lytham	A
Macclesfield	A
Maidenhead	A
Maidstone	A
Maldon (Essex)	A1
Maltby UD	A
Malton UD	A1
Malvern UD	A
Manchester	A
Manningtree	A1
Mansfield MB	A
March	A1
Margate	A1
Market Harborough RD	A1
Market Harborough UD	A
Market Rasen UD	A1
Martock	A1
Maryport	A
Matlock UD	A
Melksham	A1
Melton Mowbray UD	A
Merionethshire	A
Merthyr	A
Mexborough UD	A
Middlesbrough CB	A
Middleton	A
Middlewich	A
Mildenhall	A1
Milford Haven UD	A1
Minehead	A1
Monmouth—Borough of	A
Monmouthshire	A
Morecambe	A
Moreton Valence	A1
Morley	A
Morpeth B	A
Morpeth RD	A
Mundesley	A1
Nantwich	A
Neath & Valley	A
Nelson	A
Newark MB	A
Newbury	A1
Newcastle-upon-Tyne CB	A
Newcastle-under-Lyme	A
New Forest District	A1
Newmarket	A1
Newport, Mon.	A
Newport Pagnell	A1
Newquay	A1
Newton Abbott	A1
Normanton UD	A
Northallerton District	A
Northallerton UD	A
Northampton CB	A
North Shields	A
North Walsham	A1
Northwich	A
Norton Radstock	A1
Norwich	A
Nottingham CB	A
Nuneaton MB	A
Oakham RD	A1
Oakham UD	A1
Okehampton	A1
Oldham	A
Ongar	A
Ormskirk	A
Ossett & Horbury	A
Oswestry	A
Oundle UD	A1
Oxford	A
Oxted	A1
Padstow	A1
Paignton	A1
Par	A1
Pembrokeshire	A
Penmaenmawr	A
Penrith UD	A
Penzance	A1
Peterborough, Soke of (Eastern Regional portion)	A1
Petersfield	A1
Pickering	A
Plymouth	A
Pontefract MB	A
Pontypool & District	A
Pontypridd District	A
Porthcawl	A
Portishead	A
Portland Bill	A1
Portsmouth	A
Port Talbot	A
Preston	A
Princetown	A1
Pudsey MB	A
Pulborough	A1
Radnorshire, County of	‡A1
Ramsgate	A1
Raunds UD	A
Rayleigh	A
Reading	A
Redcar B	A
Redditch UD	A
Redhill & Reigate	A
Rhondda Valley	A
Richmond B (Yorks.)	A
Ripon MB	A
Rochdale	A
Rochester	A
Ross-on-Wye	A1
Rossendale Valley	A
Rotherham CB	A
Royston	A1
Rugby MB	A
Rugeley UD	A1
Rushden UD	A
Saffron Walden	A1
St. Albans	A
St. Austell	A1
St. Helens	A
St. Neots	A1
Salisbury City	A1
Salisbury Plain	A1
Sandy	A1
Sawbridgeworth	A
Saxmundham	A1
Scarborough MB	A
Scunthorpe MB	A
Seaford & Newhaven	A1
Selby UD	A
Sevenoaks	A
Shaftesbury	A1
Sheerness	A1
Sheffield MB	A
Shepton Mallet	A1
Sherborne	A1
Shipley	A
Shoeburyness	A
Shoreham	A
Shrewsbury MB	A
Sirhowy Valleys	A
Sittingbourne	A1
Skegness UD	A1
Skipton UD	A
Sleaford UD	A
Slough, Windsor & Eton District	A
Smethwick CB	†A
Smettisham	A1
Solihull B	A
Somerset, County of	‡A1
Southampton & Eastleigh	A
Southend-on-Sea District	A
Southport	A
South Shields CB	A
Southwold	A1
Spalding UD	A1
Stafford MB	A
Staines	A
Stamford MB	A
Stantonwick	A
Stevenage	A
Stockport	A
Stockton RD	A
Stockton-on-Tees B	A
Stoke-on-Trent CB	A
Stoke Orchard	A1
Stourbridge MB	A
Stouport UD	A
Stowmarket	A1
Stratford-on-Avon MB	A
Stroud (RD Area)	A1
Sunderland CB	A
Sunningdale	A1
Sutton Coldfield MB	A
Swadlincote UD	A
Swaffham	A1
Swanage District	A1
Swansea	A
Swindon District	A
Swinton UD	A
Tamworth MB	A
Taunton	A1
Tavistock	A1
Tenterden	A1
Teignmouth	A1
Tewkesbury	A1
Thames Haven	A
Thetford	A1
Thirsk RD	A
Thorpe Bay	A
Thurrock UDC (including Tilbury, Grays and the area north to Billericay)	A
Todmorden MB	A
Tonbridge	A1
Torquay	A1
Totnes	A1
Tring	A1
Trowbridge	A1
Truro	A1
Tunbridge Wells	A1
Tynemouth CB	A
Ulverston	A
Uppington (Salop)	A1
Uttoxeter RD	A1
Uttoxeter UD	A1
Wakefield CB	A
Wakefield RD	A
Walsall CB	A
Wallsend B	A
Walsden	A
Walton-on-Naze	A1
Ware	A
Warminster	A1
Warrington	A
Warwick MB	A
Wednesbury MB	A
Wellingborough UD	A
Wellington UD	A
Wellington (Somerset)	A1
Wells (Norfolk)	A1
Wells (Somerset)	A1
Welwyn	A
Welwyn Garden City	A
West Bromwich CB	A
Westbury	A1
Westcliff-on-Sea	A
Westerham	A1
West Hartlepool CB	A
Westmorland	A
Weston-super-Mare	A1
Weybridge	A
Weymouth (incl. Portland Bill, excl. Portland Stoneyards)	A1
Whitby UD	A1
Whitby RD	A1
Whitehaven	A
Whitley & Monkseaton UD	A
Whitstable & District	A1
Wickford	A
Widnes	A
Wigan	A
Wigton	A
Wilmslow	A
Wiltshire, County of	‡A1
Wimborne	A1
Wincanton	A1
Winchester	A1
Windermere	A
Wisbech	A1
Witham	A1
Withernsea UD	A
Woking	A1
Wokingham	A1
Wolverhampton CB	A
Wolverton District	A1
Woodbridge	A1
Woodhall Spa UD	A1
Woodstock	A1
Worcester CB	A
Workington	A
Worksop MB	A
Worthing	A1
Wrexham (incl. Cefn)	A
Wroughton	A1
Wylam	A
Wymondham	A1
Yate	A1
Yeovil Borough	A1
York CB	A
Ystalyfera	A

* For Birkenhead, Liverpool and London the rates are :—Craftsmen, 5s. 1d. ; Labourers, 4s. 5½d. In the case of London the rate beyond the 12-mile radius is : Craftsmen, 5s. 0½d. ; Labourers, 4s. 5d. † Plus 4d. per working day. ‡ This is the County rate and applies except where higher grades are stated.

NOTE.—Carpenters and Joiners providing own tools when employed in establishments operating under the Supplementary Rules for Woodworking Factories and Shops receive 2d. per day ; when employed on other building industry work, 4d. per day.

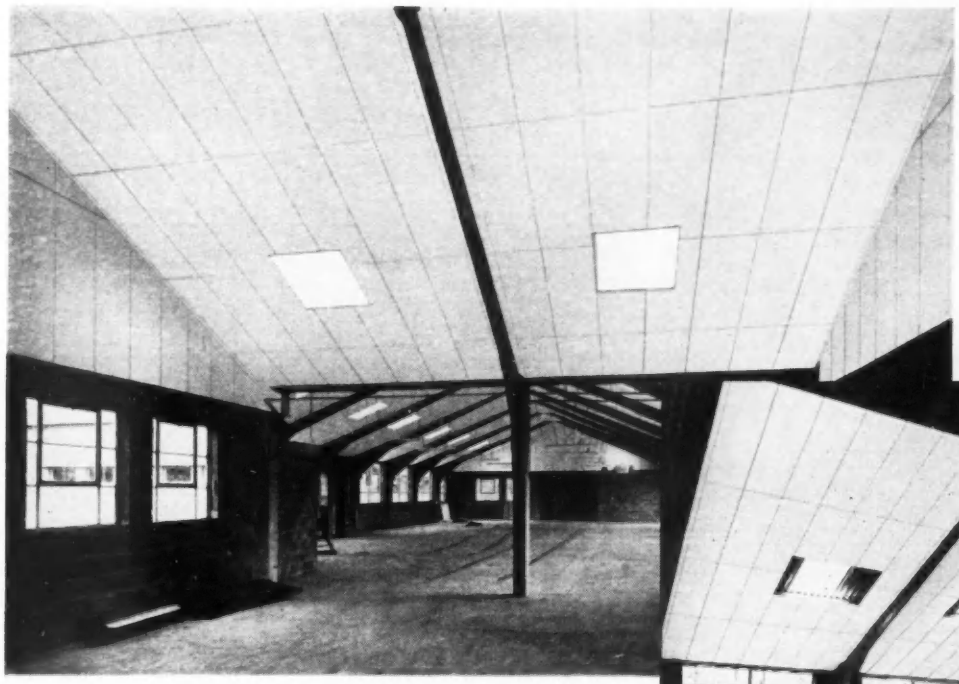
WOMEN'S RATES.—In all districts throughout the country the rate of wages for women engaged in craft processes is 4s. 1d. per hour. Women engaged on work other than craft processes, 3s. 9d. per hour.

For Building Trade Wages in Scotland, see page 636

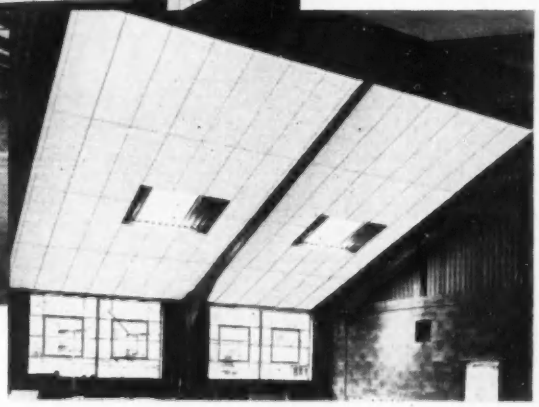
Efficient insulation with **MARLEYcel** *

- **U value** *=0.18 with ¾" Marleycel self-extinguishing grade*
- **Lower installed cost** *than any comparable alternative*
- **Greater light reflection** *improves working conditions*
- **Quick removal of individual panels with Grecon** *facilitates inspection of ceilings and roofs*
- **Speedier erection** *reduces loss of production time*

Marleycel is quickly fixed using the new GRECON Fixing System



The standard system comprises 9′ lengths of T-section galvanised steel, spring steel clips, steel hangers and sleeves. This method of fixing ensures the quick removal of individual panels.



Photography by courtesy of E. W. Tyler & Co. Ltd, Tonbridge. Marleycel installed using the Grecon Fixing System for R. Hewett Ltd, Building Contractors, Boyn Valley Trading Estate, Maidenhead.
The partially insulated roof in the smaller photograph illustrates the improved appearance and light reflection.

Marley Technical Staff will always advise on installation procedures including the Grecon Fixing System, and on the appropriate Marleycel thickness.

*
Marleycel Expanded Polystyrene

A pure white insulating material of moulded cellular structure, supplied in featherweight sheet form. Manufactured by Shell and developed by Marley to serve the building industry.

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Recommend roof lighting with UNILUX and your client will have all the daylight he wants—and he'll have it without any trace of glare. The *modern* answer to every roof lighting problem is UNILUX: a fibreglass reinforced plastics material, available in a range of attractive colours and manufactured in so wide a range of profiles that the sheets conform to every standard roof sheeting.

UNILUX is made by a member-company of the U.A.M. Group—a name synonymous with "better building". The "U.A.M. GROUP INFORMATION BULLETIN" is published every two months to keep you informed of the Group's activities. May we add your name to our Mailing List?

Unilux the Best in Translucent Sheeting

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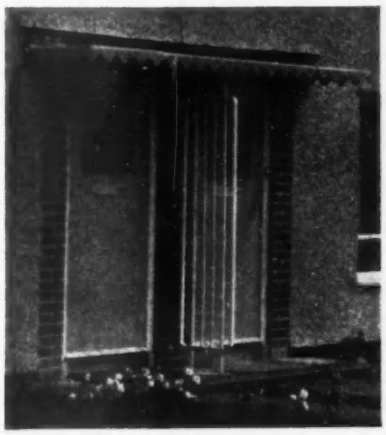
TECHNICAL REVIEW

This Review of plant, equipment and materials—in most cases new or with new features—is intended to give brief details only of the products mentioned. Notices are based on data supplied by the manufacturers. Additional information and prices can be obtained either direct or by using the prepaid Readers' Service form which appears on page 152 of this issue. The form can be used for more than one inquiry.

1. Asbestos Cement



Asbestos cement is frequently regarded as a rigidly standardised product which must be accepted as it is, without the possibility of any design modifications. That this need not be so is shown by the asbestos cement DOOR CANOPIES, specially designed by D. Richards ARIBA, recently used for 240 dwellings at Shoeburyness.

The canopies are made in three sections, right and left hand ends, and an intermediate section to make up the required length. With this system of construction it is possible to produce a canopy of virtually any length by adding the requisite number of intermediate sections. It is pointed out, however, that in this instance the fact that a substantial number of purpose made units was required meant that no heavy extra charge had to be made for the special moulds. For smaller quantities, the price might be more adversely affected.

The Universal Asbestos Mfg. Co., Ltd., Tolpits, Watford, Hertfordshire.

2. Corrosion

A new anti-corrosive LIQUID METAL ALLOY, which can be applied either by brush or spray, is helping to curb the incidence of rust, which already costs industry in Britain more than £600m. each year. It is a compound of anodic metal particles, 99 per cent pure metal, suspended in a plastic anti-corrosion medium. By making use of a natural phenomena, the metals separate upon application into two distinct parallel layers of high purity metal. The two layers have different electro-potentials. The lower, darker layer, is the functional galvanic coating which protects the ferrous surface from rust. The top layer is a light metallic weather foil which protects the functional coating from oxidation by weather exposure. Together they exert a double cathodic protection. The liquid metal is completely incombustible and will withstand red heat.

Stewart Wales, Somerville Ltd., Calderbank House, 99 Brownside-rd., Cambuslang, Glasgow.

3. Heating

In November, a new series of OIL-FIRED BOILERS will become available with outputs of between 1 and 2m. Btu/hr. This is quite a step forward, for until now an output in this range could only be obtained by conversion of solid fuel boilers to burn oil. The new boilers, the largest of which will weigh something like 3½ tons, consist of 4 to 8 cast-iron waterway sections which, when assembled, form a combustion chamber with water cooled sides and base. The finned design of the water tubes provides a large secondary heating surface and gives the boiler a high thermal efficiency. Automatic governing of draught at the boiler flue outlet is necessary and this is provided by an automatic damper. This avoids the cooling of the stack and requires no increase in the air inlet demand of the boiler house. The equipment should be very suitable for large buildings such as offices, factories and hospitals.

Thomas Potterton Ltd., Cavendish Works, Buckhold-rd., London, SW18.

4. Paint

The feature of a new RED LEAD PAINT is a very fast drying time, for even under the worst conditions it should be surface dry in three hours and hard dry (for recoating) in eight hours. The paint, which is a primer for use on bare metal, has a red lead content of more than 55 per cent and its flow properties are good—40-50 yards to a gallon has been obtained on ships' topsides. For storage purposes, a special formula has been used to keep the pigment continually in suspension so as to avoid settlement. Even after six months, settlement is very slight and it takes little time to bring the paint to a working consistency.

Fenner & Alder Ltd., Fenal House, Millwall, E14.

5. Refuse

A three-month trial at Swale in Kent in which PAPER SACKS were used for refuse instead of dustbins has proved very successful. The sacks are made from two plies of wet strength kraft paper and will contain as much as 70 lb. of refuse. In the Swale trial, which embraced 520 premises, not one sack in the 6,000 used failed through damage by its contents.

The system itself is fairly simple. The

paper sack is clipped to a holder, which has a hinged lid for inserting the refuse. When the dustman calls, he brings a new sack and removes the old one, the neck of which he twists so that the contents are securely contained. The full sack is then thrown into the dustcart. Apart from the better standard of hygiene, the system is claimed to be faster in operation than existing systems.

Reed Medway Sacks Ltd., Larkfield, nr. Maidstone, Kent.

6. Ventilation

To provide maximum ventilation with complete weathering, multi - panel LOUVRED VENTILATORS can be built up from a selection of standard units. These louvre units are constructed of aluminium throughout and can be supplied in a wide range of sizes, each with a louvre box depth of 2½ in. To give weather protection, the panels are sealed with pvc or similar sealing strip which seats in purpose-made grooves in the louvre box sides. The horizontal joints are weathered by a turn-down edge along the bottom of each unit. Bird guards can be fitted to the front faces of the louvres.

Greenwood's & Airvac Ventilating Co., Beacon House, Kingsway, London, WC2.

Technical Publications

AN ATTRACTIVE 40-page trade catalogue has been issued by E. K. Cole Ltd., 5 Vigo-st., London, W1. Profusely illustrated in colour, it details the complete range of Ekco electric heating equipment, including the latest models—the 'Fandair' tangential fan heater, the 'Radiant K' combined convector/radiant heater and the Ekcostat control for the automatic temperature control of all single-heat electric blankets.

'SPRAYED LIMPET ASBESTOS—HEAT AND SOUND INSULATION' is the subject of the latest 14-page brochure available from Turners Asbestos Cement Co. Ltd., of Trafford Park, Manchester 17.

Printed in two colours, with a special double-fold cover, it deals extensively with this versatile specially treated asbestos fibre and its many uses.

News In Brief

Business Efficiency Exhibition

THIS year's National Business Efficiency Exhibition to be held at Olympia from October 3 to 12 will be the biggest ever staged in this country.

RCA Directory of Members

THE REINFORCED CONCRETE ASSOCIATION has issued its Directory of Members, revised to July, 1960. As in previous editions the present one contains the very useful classified lists of industrial members.

Corrosion Advice Bureau

RESEARCH now being undertaken by the Corrosion Advice Bureau is directed at testing composite protective schemes of sprayed metal coatings and paint when these are properly chosen and well applied, and not to sprayed metal coatings only, as stated in 'The Builder' of August 5.

Technical Information

A COURSE of twelve lectures on the 'Presentation of Technical Information' began on September 23 at Ealing Technical College, St. Mary's-road, W5. The course, which will run for twelve consecutive Fridays, is of great value to scientists, technologists and practising technical authors; there are still several vacancies. The fee will be £1.

Polysulphide Sealants

TWO BUILDING INDUSTRY FORUMS, sponsored by J. M. Steel & Co. Ltd., were held in London and Newcastle-upon-Tyne on June 9 and 22 respectively. Both meetings were convened to discuss the properties and applications of polysulphide sealants. Verbatim reports of both meetings have now been published in booklet form, copies of which may be obtained from the sponsors.

BCBI Annual Report

THE NINETY-THIRD annual report of the Builders' Clerks' Benevolent Institution containing the annual statement of accounts for the year ended December 31 has now been issued. Receipts for the year amounted to £3,518. Mr. F. R. Leadsom, FIOB, of Thomas Lowe & Sons Ltd., has been elected president for the 1960-61 session.

Shortage of Carpenters

LINCOLN'S new £157,000 technical school, scheduled for completion by the end of 1960, will not be finished within the contract period. Delay has been caused by a shortage of joiners. The chief assistant city architect, Mr. J. Bates, ARIBA, has said that for some time there has been a general shortage of joiners.

Fire Protection in Factories

ONE OF THE CHIEF TOPICS of discussion at the National Fire Protection Conference, reported in the current issue of the Fire Protection Association Journal, was the important new fire legislation introduced by the 1959 Factories Act for the improvement of fire protection in factories, which the Minister of Labour hoped to bring into operation by the end of 1960. That this legislation is timely can be seen by the recently published figures for fire losses during the first half of 1960, which at nearly £27 m. have exceeded the total losses for the whole of 1958. The Journal is issued to members of the Fire Protection Association, 31/45, Gresham-street, London, EC2. Price to non-members 4s.

A Trestle for Scaffolding Boards

AMONG THE ITEMS published in the September edition of Technical Digests is a leaflet which describes a system for supporting scaffold boards and steel tubes. The system makes use of welded tubular steel trestles with appropriately shaped heads. Technical Digests may be obtained from DSIR, at 5-11 Regent-street, London, SW1.

Trade News

Paint Company's Merger

A MERGER has been arranged between Duresco Products Ltd., of Charlton, London, SE7, and Aspinalls (Paints) Ltd., of Carleton, Skipton, Yorkshire. It is intended that the two companies will retain their separate identities, although certain facilities, particularly in the field of depots and transport, are to be pooled. Mr. B. Aykroyd, chairman of Aspinalls, is joining the Duresco board of which Mr. P. Jukes is chairman and Mr. A. E. G. Brown is managing director. Mr. P. Jukes, Mr. B. F. Jukes and Mr. A. E. G. Brown are joining the Aspinalls board.

New Premises

JOHN WILLIAMS OF CARDIFF LTD. announce the transfer of their Metal Window Division to new and larger premises at Curran-road, Cardiff. Production in the new premises is expected to start on August 22.

GERLAND LTD., distributors of Gerflex colour flooring, have moved to larger offices at 90 Crawford-st., London, W1.

HEATRAE LTD. have opened a new office in Central London at Norwich House, Southampton-place, WC1.

Company Acquisition

ALLIED IRONFOUNDERS LTD. have acquired J. S. & F. Folkard Ltd., of Mill Hill, NW7, producers of a wide range of plumbing equipment in plastics and brass. Distributed under the trade names of Vulcathene and Vultex, the products include many specialised lines for use in hospitals, laboratories and atomic installations.

Australian Venture

THE RUBEROID CO. LTD. announce the formation of The Ruberoid Company of Australia Pty. Ltd. in conjunction with The Colonial Sugar Refining Co. Ltd. of Sydney. The wide range of Ruberoid roofings and bituminous building materials will shortly be available, manufactured in Australia from a plant to be erected in an industrial suburb near Melbourne.

Change of Name

The NORTHERN ALUMINIUM CO. LTD. has changed its name to Alcan Industries Ltd. The purpose behind the change is to identify the company clearly as a member of the Aluminium Ltd. of Canada enterprise and involves no change of ownership or policy.

Heating Your Home

ON SEPTEMBER 19 The Design Centre opened a home heating exhibition in which nearly sixty heaters for the main types of fuel were on display. The range is a fairly wide one, including a selection of boilers, radiators, convectors and radiant fires, so that the various methods of home heating are represented. The exhibition is open until October 29.

New Midlands Office

WATES LTD., the building and civil engineering contractors, have recently left their New Street, Birmingham offices to move to 94 Hagley-road, Edgbaston.

Reorganisation of Scottish Interests

ROBT. INGHAM CLARK & CO. has taken over and will develop the activities in the field of industrial and marine paints previously pursued by Scottish Paints, Renfrew and Belfast, whilst R. Gay & Co. (Scotland) has been formed to supply paint products for the decorative and maintenance trades manufactured at their Renfrew works.

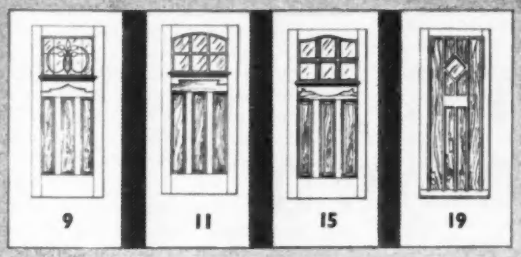
The offices of R. Gay are now at St. Andrew's Works, Renfrew, and the Scottish office of Robt. Ingham Clark will shortly be moved to the same address. The Ulster office of the two companies remains at 13, Dalton-street, Belfast, 5.

Price Reductions

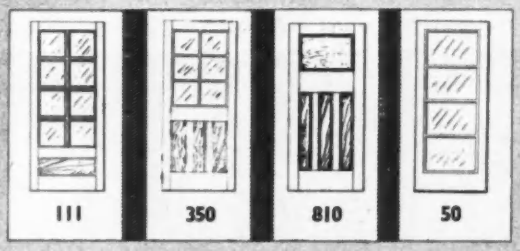
RADIATION'S new Parkray 10 boiler flue set, which includes the 'Clean Air' inset fire and a welded steel boiler, is being offered at the list price of £7 17s. 9d. This is a reduction of £1 6s. on the previous model. The Parkray inset 'Clean Air' fire is itself reduced in price from £2 12s. 6d. to £2 4s. 6d.

P. C. HENDERSON LTD., manufacturers of sliding door gear, announce a reduction in price on two of the standard sets of 'Marathon' ball race runners. 'Marathon' set J.2, suitable for all interior sliding doors over 1 ft. 10 in. to 2 ft. 4 in. width, is reduced from 44s. to 43s. 6d. per set. 'Marathon' set J.3, for door widths over 2 ft. 4 in. to 2 ft. 10 in. is reduced from 45s. to 44s. per set.

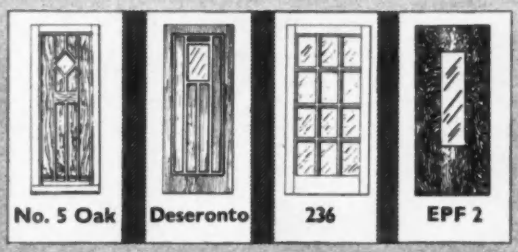
DOORS



IN

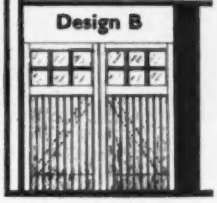


SCORES



-and all from stock!

We list over forty different doors —and every one of them's in stock. There are flush doors and panel doors, front doors, back doors and interior doors. Garage doors and gates, too. Well designed, well made—everything that doors ought to be.



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BRYCE, WHITE AND COMPANY LTD., LANGLEY, SLOUGH, BUCKS.

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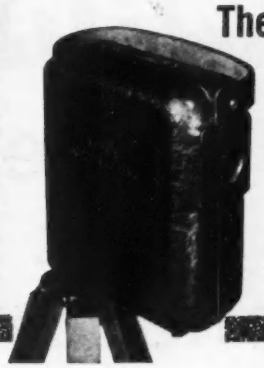
The Cowley Level



automatically gives a level line of site in 60 seconds with an accuracy of ¼" at 100 ft. — and costs only **£18**

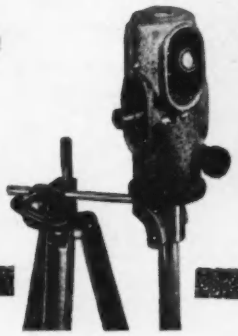
complete with tripod staff and target. Leather Case for Instrument £2.10.0. Full range of accessories available.

And what's more the Cowley Level can be used by unskilled labour, and it needs no setting up. Over 30,000 Cowley Levels are now in use all over the country. "Our Cowley Levels are used in every stage of building whether we are building bungalows or complete factory estates" says one Wiltshire Contractor "From levelling the foundations, to checking levels at any height they are invaluable. They have paid for themselves many times over."
You can't afford to be without the Cowley Level. Ask for a demonstration, or fill up the form below.

The Sitesquare

sets out a right angle in under two minutes with an accuracy of ¼" at 100 ft.— and costs only **£18**

Leather Case for Instrument £2.10.0. Alternative tripod and holdalls available.



For accurate work on sites of any size the Sitesquare is a 'must'. Reliable and absolutely accurate it lays out or checks right angles and uprights faster than you ever thought possible.
These days of high labour costs demand the speed and efficiency of the Sitesquare.

Ask your supplier for a demonstration or fill up the form below

☐ Please forward literature Sitesquare/Cowley Level. ☐ Send me address of nearest stockist.

☐ Arrange a demonstration at no obligation to myself.

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ADDRESS _____

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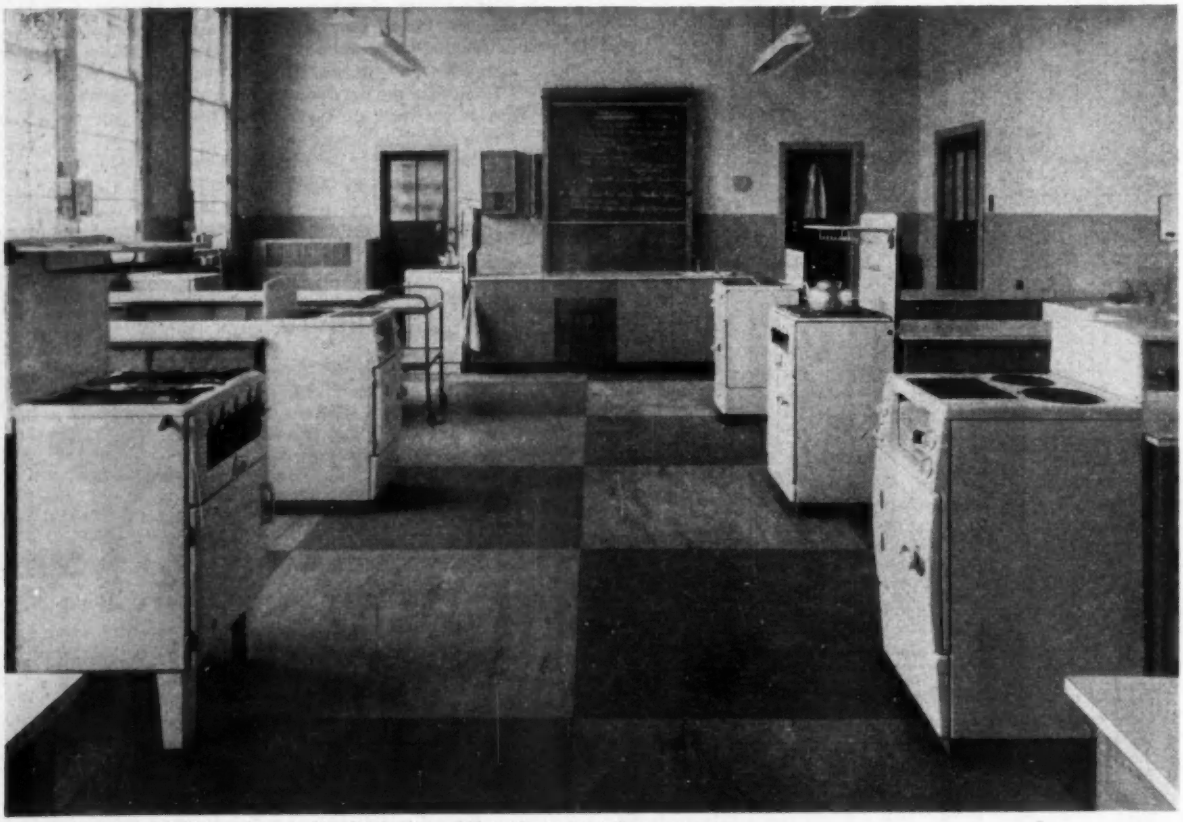
meeting a modern challenge IN LARBERT HIGH SCHOOL STIRLINGSHIRE

recently rebuilt to provide facilities for more than 1,000 students



In one of the Domestic Science Rooms: Blue Marleyflor and Grey Marleyflor in large squares.
Architect: A. J. Smith, A.R.I.B.A., F.R.I.A.S. *Main Contractor:* Duncan Stewart (Bonnybridge) Limited

Over 3,000 yards of Marleyflor, the finest *vinyl* flooring, have been installed in the entrance hall and corridors, in class rooms and domestic science rooms, in commercial rooms and in the library of Larbert High School. Colours and designs were selected for enduring interest, with shapes of blending or contrasting colours used for practical purposes and decorative effect. Marley Vinyl Seaming Strip welds Marleyflor into a smooth, dust-free surface, with all the advantages of a jointless floor.

For a copy of the new publication 'Thermoplastic Tiles on Floor Heating Systems' by F. L. Brady, M.Sc., A.R.I.C., write to Central Sales Office, Section F.B.

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OVERSEAS BUILDING

From Our Own Correspondents

AUSTRALIA (SOUTH).—Among the plans to increase South Australia's water supply, outlined by the Premier, is the construction of new reservoirs on the Torrens at Kangeroo Creek and on the Onkaparinga at Clarendon. . . . The Royal Exchange Assurance group of companies plans to erect a 12-storey building at the corner of Currie and Peel-streets in Adelaide.

AUSTRALIA (VICTORIA).—A £A4m. factory is to be built near Geelong by the Associated Portland Cement Manufacturers Ltd. An Australian company, the Victoria Portland Cement Co. Ltd., has been formed to operate the plant, which will incorporate the most modern methods of production. Announcing the plan, the Premier of the State of Victoria, the Hon. H. E. Bolte, said that geological investigations near Geelong had proved adequate reserves of raw materials for a plant which would have an initial productive capacity of 200,000 tons a year. Construction will be started soon.

CANADA (BRITISH COLUMBIA).—Avallin Mines, Ltd., and Caycuse Copper Co., Ltd., have announced plans to start development work before the end of the year on their properties in the Cowichan area, Vancouver Island.

CANADA (BRITISH COLUMBIA). — John Laing and Son (Canada) Ltd. are to start work next month on a $½m. project for the construction of a new joint YMCA/YWCA building at New Westminster. The building will comprise part single and part two-storey construction covering 52,000 sq. ft. and will incorporate a large indoor swimming pool. Completion of the development is expected by May, 1961.

HONG KONG.—The War Office is to carry out extensive improvement works to their installations in Hong Kong, the first phase of which will be the demolition of some 30 buildings at the Gun Club Hill Barracks, Kowloon, all built before 1900. This will make possible the rehabilitation of existing barrack blocks with smaller rooms and better leisure and ablution facilities. Architects are Leigh & Orange (J. C. Howorth, ARIBA) of Hong Kong. . . . Other work, at Murray Barracks, in Victoria, is being planned by W. Szeto, BSc, and at Sek Kong, New Territories, by G. D. Su, BSc. . . . A new military hospital, for which site formation has started, has been designed by the War Office Architects Department, Chessington, with E. Cumine, AA, Dip, FRIBA, as local architect. The consulting engineers are W. Zinn & Associates of London, and the quantity surveyors, Messrs Langdon & Every (Far East), Hong Kong. . . . A negotiated contract value $25m. has been awarded to Paul Y. Construction Co., for the building of a 26-storey luxury hotel on the site of the Murray Parade Ground, Hong Kong, by Wyncor Ltd., of Dallas, Texas. Designed by Palmer & Turner (I. J. Campbell, ARIBA) of Hong Kong, the total value of the hotel is expected to reach $60m., on 70,000 sq. ft. of land costing $14½m. It will contain about 1,000 first-class suites and rooms, and will be fully air-conditioned. Some of its main features will be a glass-covered roof garden cocktail bar, open-air swimming pool, cabanas, a Japanese garden at fourth-floor level and a 700-seat dining room.

ISRAEL.—Work is to start shortly on the excavation and construction of the large pumping station of the Jordan-Negev project, which is being built on the shores of Lake Kinneret. The site of the project's second pumping station is also being prepared. Six large Israel and foreign construction companies submitted tenders for the building of the Kinneret pumping station, and the name of the selected firm will be published soon. The station will cost some I£6m. and be completed within 2½ years.

ISRAEL.—A start will be made soon on the erection of a new 17-storey hotel, the 'Appolonia,' on the Herzliya beach, north of Tel Aviv, for Israel America Hotels Ltd. The hotel will have 140 air-conditioned rooms, each with bath.

LAOS AND CAMBODIA.—Australian experts are to give further help in planning the Mekong River project in SE Asia, whence the first of a group of 10 have left to carry out drilling work at two dam sites and to train Asian geologists and technicians who will work on the project. Australia has offered expert advice, materials and equipment as a Colombo Plan contribution. Eight other nations will share in the work, on which $9m. will be spent in the preparatory phases alone. The sites of two dams along the Mekong, one in Cambodia, the other in Laos, have already been chosen by officials concerned in the building of dams and tunnels for the Snowy Mountains scheme in Australia.

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MALAYA.—The PWD of Malaya has announced a programme of M$350m. for the second Five Year Plan starting in January, 1961. M$200m. of this will be spent on water supplies for the country's two million rural dwellers, and M$150m. on arterial roads.

MOZAMBIQUE. — The Government of Mozambique has been authorised to open special credits for schemes under the development plan for that territory. Port improvements at Nacala will cost 12½m. escudos, and 57,900,000 escudos will be invested in railways.

NIGERIA (EASTERN REGION).—In view of the expected future expansion of the Nigerian economy, and of the growing importance of Enugu in particular, the Regional Government has conceived the idea of a completely new integrated town to be planned on a site in the eastern outskirts of the existing town. This development is to be known as Independence Layout in commemoration of October 1. The firm of E. R. Collister and Associates, of 70 Victoria-street, London, SW1, were appointed architects and town planning consultants early in 1959, with preliminary instructions to prepare a master town plan of the area. This plan combines the requirements of government, commerce, trade, public services, recreation and housing, in one integrated development. Preliminary work has started on roads, services and some of the buildings. E. R. Collister and Associates are responsible for the design of the government centre, comprising the Parliament building and a 19-storey office unit to accommodate the various ministries. The Parliament building will contain two chambers of legislature, one for the House of Chiefs and one for the House of Assembly. Both buildings will be air conditioned from central plants and full sunshading will be provided by various forms of sun-breaker screens. The structure will be of reinforced concrete; fast lift services will serve all floors in the office building. The contract is expected to go to limited international tender next March, and construction should take approximately 2½ years to complete. The estimated cost is £2m.

SOUTH AFRICA.—Work on the construction of the £½m. nuclear research institute of the Universities of Stellenbosch and Cape Town will probably start in 1961. Surveying of the 300 acre site near Faure (between Cape Town and Somerset West), where the institute will be built, has begun.

USA (ALASKA).—A modern highway, from Alaska's far north through British Columbia down to the southern states, was agreed upon by negotiations between the new State of Alaska, the Yukon Territory and British Columbia.

Western Nigerian Tarring Contract

THE WESTERN NIGERIAN GOVERNMENT is reported by Barclays Bank DCO to have awarded contracts amounting to £2m. for the tarring of roads to Nigersol Construction Co. Ltd. The road works, which will cover all parts of the Region, come under the 1960-65 development plan.

Building in South Africa

THE VALUE of building plans passed in the eighteen principal urban areas of South Africa is reported by Barclays Bank DCO to have fallen in July by almost £700,000 (to a total of £6½m.) compared with the total for June.

This decrease was caused principally by a drop of £1.4m. in the value of residential plans passed (particularly flats) offset by a rise of roughly £900,000 in the non-residential building programme. Factory plans and major alterations accounted for much of the balance. Plans passed during the first seven months of this year were valued at £38.6m., against £33.7m. in 1959. The growth this year, states the Bank, has been reflected to the extent of £3.5m. in non-residential construction, other than factory and mine buildings. The programme in respect of flats and dwellings other than houses has also expanded by roughly £1m. this year.

British Columbia Trade Fair

THE BRITISH COLUMBIA International Trade Fair will be held in Vancouver from May 3 to 13, 1961, in the Hall of Industry and Commerce. Exhibits will include building materials, electrical equipment, steel products, hardware, and exhibits from banks, international airlines and transportation. Many British firms have already reserved space.

British Company for N. Rhodesia

THE MITCHELL CONSTRUCTION CO., LTD., of Peterborough and London, is opening an office in Lusaka, Northern Rhodesia. The company will operate throughout the Federation of Rhodesia and Nyasaland, undertaking all types of building and civil engineering works. Mr. Basil Darlington has been appointed general manager of the Rhodesian office.

Overseas Contracts Open

IRAQ.—The Ministry of Communications invites tenders for the main civil engineering works in the construction of an international airport at a site at Qasr El-Meleh, approximately 20 km. west of the centre of Baghdad. The principal works consist of a runway, 3,000 m. long and 45 m. wide; a main taxiway; exit taxiways and aprons, secondary access roads; complete airfield lighting installation; water and fire mains; and a complete sewerage system with treatment plant. Tender documents may be obtained from the Directorate General of Roads and Bridges, Ministry of Communications, Baghdad, between September 28 and December 15 upon payment of £100, which is non-returnable. The documents may be inspected at the offices of Sir Alexander Gibb & Partners, Queen Anne's Lodge, Westminster, London, SW1, or at the Iraq Embassy in London. Tenders must be submitted to the Directorate General of Roads and Bridges in Baghdad by 12 noon on January 15, 1961. They must be accompanied by a preliminary deposit of £60,000; a list of works of a similar nature; details of capacity, organisation and qualification; details of the programme and methods of construction proposed; and company credentials.

VIETNAM.—Tenders are invited, to close on December 31 this year, for the construction of a bridge over the Mekong River at Mythuan in Vinh Long Province, some 60 miles south-east of Saigon. Estimated to cost £1,450,000, the bridge will be 2,000 ft. long by 24 ft. wide. It is expected to start building in March, 1961, for completion in 1963. Details and tender documents may be obtained from the Dept. of Public Works, Saigon.

SCOTTISH BUILDER

Appointment Creates Precedent

AN ABERDEEN WOMAN has achieved distinction by her appointment as Deputy Regional Architect to the North-Eastern Regional Hospital Board. The first woman to hold such a post in Scotland, she is Miss Frances J. H. Mercer, ARIBA, 15 Pitstruan-place, Aberdeen. The sole woman in a short list of four, she is meantime senior assistant architect with the board, and has been on the board's staff for about 11 years. She held a previous appointment with Aberdeen County Council.

University Development Approved

PERMISSION for Edinburgh University to start work on the foundations of a new 14-storey arts building at the south-east corner of George-square, where a number of eighteenth century houses are being cleared, has been granted by Edinburgh Dean of Guild Court. Excavation of the site and the laying of the foundations, which will begin in November, are expected to cost about £30,000. The building will be 150 ft. high, of reinforced concrete, faced with glass, aluminium, slate, and stone, and will cost £500,000. It will contain large lecture rooms and other accommodation for the departments of Modern and Oriental Languages, English Literature, Classics, and Philosophy, and will be the first of a group of buildings costing more than £1m.

Hospital Extensions, Edinburgh

THE South Eastern Regional Hospital Board's chief architect, Mr. J. Holt, announced recently that in addition to the £500,000 extension to West House and Jordanburn hospitals in Edinburgh—plans of which were approved last week—a professorial unit will also be built on the site. Mr. Holt said that the unit was phased to be completed with the main job and that work on it would begin within the next two years. Approval to proceed, although plans for the professorial unit were not included in the £500,000 extension approved by the Dean of Guild Court, has been obtained. Work on the project will begin during the next few weeks and it will be completed by 1964.

Glenrothes Road Improvements

A NEW industrial area extending up to 100 acres is to be opened up in Glenrothes by road improvements. The new road, less than a mile long, will link the town's central road system with B921 at Over Stenton, being carried over the Leslie branch railway by a new bridge. Road and rail access will then be available to the Glenrothes southern industrial reserve.

The estimated cost of the road is more than £60,000, towards which the Secretary of State for Scotland, Mr. John Maclay, is making a 60 per cent grant to Fife County Council, who will prepare and supervise the scheme. Tenders for the contract are to be invited shortly.

SCOTTISH BUILDING TRADE WAGES

FOLLOWING are rates of wages authorised by the Scottish National Joint Council as from April 18, 1960. They apply to the whole of Scotland, including the islands of Orkney, Shetland, etc.

Grade A: Craftsmen, 4s. 11½d.; Labourers, 4s. 4d.

For apprentices, the rates are :

Year	Percentage of Craftsman's rate	For week of 44 hours s.	d.
1st	25	54	6½
2nd	33½	72	9
3rd	50	109	1
4th	66⅔	145	6
5th	75	163	7½

For female labour, the rates are :

	s.	d.
Operatives on craft operations (at end of probationary period)	4	4
Operatives on labouring operations (at end of probationary period) ...	3	10

New Factory for Ayrshire

THE Skefco Ball Bearing Company, Ltd., of Luton, intends to establish a subsidiary company at Irvine, Ayrshire, for the manufacture of production tools, equipment, and specialised machine tools used in the manufacture of ball and roller bearings. It is intended to house at Irvine certain auxiliary departments concerned with manufacturing operations which could most conveniently be separated from the main production of bearings at the two Luton factories.

BMC Road Contract

THE ROADWORKS contract for the British Motor Corporation factory at Bathgate has been awarded to John Laing & Son Ltd. They secured the £350,000 contract in competition with about a dozen firms in Scotland and England who were invited to submit tenders. Work on the scheme is expected to start within a week. It involves converting about a mile of the Edinburgh-Glasgow trunk road (A8) to dual carriageway and the construction of a new subsidiary road with a flyover junction, together with a system of sliproads and under-passes. The scheme is to be substantially completed by April of next year. An official of Sir Alexander Gibb & Ptnrs., the consulting engineers, said that it would probably be the most intensive roadway operation ever carried out in Britain.

New Buildings

FIFE.—The American firm of Beckman Instruments Ltd. are to build a £100,000 extension to their factory at the new town of Glenrothes.

HAMILTON.—Dean of Guild Court have passed plans for the erection of ten houses at Earnock, Hamilton, at a cost of £30,000, and at the same court Barney (Glasgow) Ltd., Credon-hse., Torryglen-st., Glasgow, had plans approved for the erection of twenty-five houses—eight four-apartment villas and seventeen semi-detached cottages. The cost was stated to be £75,000, and the houses will be erected at Marshall Grove, Hamilton.

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Wood chips bonded with a synthetic resin glue—excellent core material for veneers or plastic. Sound absorbent heat resisting.

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OR BOW
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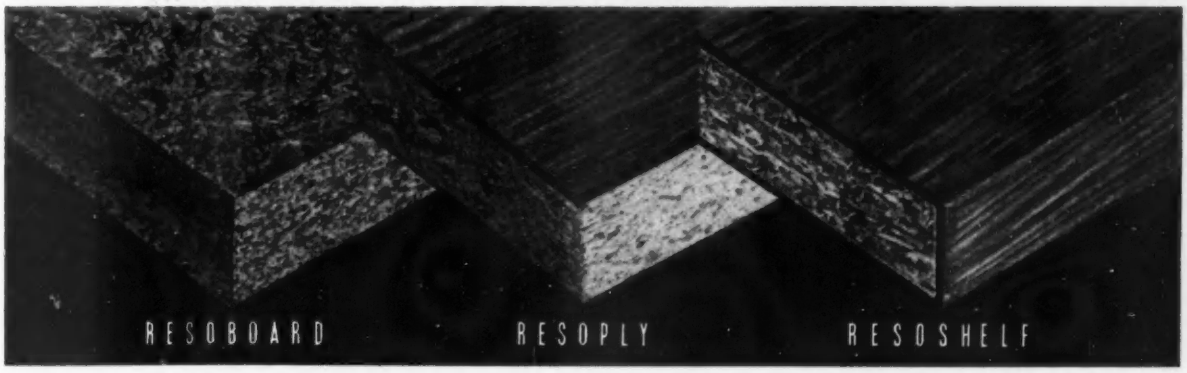
EXHIBITION
STANDS
ETC. ETC.



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GIPPING RDC.—Construction of about 3,500 yd. of 6 in. dia. stoneware sewers, concrete manholes, ventilating columns, etc., for Bramford Sewerage (contract 2). Lemon & Blizard, Ccl's constg. engrs., 59 Tufton-st., SW1. Dep. £5 5s.

OCTOBER 17

ABERDARE UDC.—Fixed price tenders for the construction of a 350,000 gal. capacity service reservoir and ancillary pipework. C. D. C. Braine & Ptnrs., Ccl's constg. engrs., Jotham's-bldgs., 26/27 St. Mary's-st., Cardiff. Dep. £3 3s.

BIGGLESWADE WATER BD.—Laying of approx. ¾-mile of 8 in. and 1½ miles of 6 in. asbestos-cement mains and also an extension to the filter house at the existing Meppershall Water Works, 6 in. spun-iron rising mains from the boreholes, and ancillary works, at Campton & Meppershall. Binnie, Deacon & Gourley, engrs., Artillery-hse., Artillery-row, Westminster, SW1. Dep. £10.

ROCHESTER CITY C.—Fixed price tenders for the construction of approx. 5,000 sq. yd. of reinforced concrete carriageway and associated kerbing and slab paving, together with foul and surface water sewers, street lighting, and ancillary works at Earl estate. City S. Dep. £2 2s.

OCTOBER 24

NEWTOWN & LLANIDLOES RDC.—Laying of approx. 6,700 lin. yd. of 3 in. dia. asbestos-cement water mains, etc., for the Dolfar & Stepaside Water Supply Scheme. W. Herbert Bateman & Ptnrs., constg. engrs., Chesterfield-hse., Batheaston, Bath, Som. Dep. £3 3s.

OGWEN RDC.—Construction of about 4 2/5 miles of AC mains and fittings up to 6 in. dia. for Pentir & Bryn-y-Waen Water Mains extension. Howard Humphrey & Sons, constg. engrs., West-st., Epsom, Surrey. Dep. £5 5s.

OCTOBER 26

LEEK RDC.—Construction of about 6,125 yd. of 5 in., 2,875 yd. of 4 in. and 8,975 yd. of 3 in. dia. spun-iron water mains, with fittings for same; a mass concrete reservoir of 75,000 gallons capacity at Heaton; a booster pumping station at Rudyard; and other incidental works in the Parishes of Rudyard, Heaton, Rushton Spencer and Rushton James. Willcox Raikes & Marshall, engrs., 33 Gt. Charles-st., Birmingham 3. Dep. £5 5s.

NOVEMBER 4

IRLAM UDC.—Construction of a pumping station and the laying of approx. 3½ miles of precast concrete sewer pipes from 15 to 45 in. dia., with manholes and other ancillary works. E&S. Dep. £5 5s.

GENERAL BUILDING WORK (LONDON)

CHELSEA.—Housing.—LCC have received a planning application from Stone, Toms & Ptnrs. for the erection of 22 houses at 1-43

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(A) MANCHESTER CORPN.—Design and supply of steel bar reinforcement for the r.c. structure of a new office building at Hyde-rd., Manchester 12. Gen. Mgr.

MUNICIPAL AND CIVIL ENGINEERING WORKS, ETC.

OCTOBER 15

GIPPING RDC.—Construction of about 3,500 yd. of 6 in. dia. stoneware sewers, concrete manholes, ventilating columns, etc., for Bramford Sewerage (contract 2). Lemon & Blizard, Ccl's constg. engrs., 59 Tufton-st., SW1. Dep. £5 5s.

OCTOBER 17

ABERDARE UDC.—Fixed price tenders for the construction of a 350,000 gal. capacity service reservoir and ancillary pipework. C. D. C. Braine & Ptnrs., Ccl's constg. engrs., Jotham's-bldgs., 26/27 St. Mary's-st., Cardiff. Dep. £3 3s.

BIGGLESWADE WATER BD.—Laying of approx. ¾-mile of 8 in. and 1½ miles of 6 in. asbestos-cement mains and also an extension to the filter house at the existing Meppershall Water Works, 6 in. spun-iron rising mains from the boreholes, and ancillary works, at Campton & Meppershall. Binnie, Deacon & Gourley, engrs., Artillery-hse., Artillery-row, Westminster, SW1. Dep. £10.

ROCHESTER CITY C.—Fixed price tenders for the construction of approx. 5,000 sq. yd. of reinforced concrete carriageway and associated kerbing and slab paving, together with foul and surface water sewers, street lighting, and ancillary works at Earl estate. City S. Dep. £2 2s.

OCTOBER 24

NEWTOWN & LLANIDLOES RDC.—Laying of approx. 6,700 lin. yd. of 3 in. dia. asbestos-cement water mains, etc., for the Dolfar & Stepaside Water Supply Scheme. W. Herbert Bateman & Ptnrs., constg. engrs., Chesterfield-hse., Batheaston, Bath, Som. Dep. £3 3s.

OGWEN RDC.—Construction of about 4 2/5 miles of AC mains and fittings up to 6 in. dia. for Pentir & Bryn-y-Waen Water Mains extension. Howard Humphrey & Sons, constg. engrs., West-st., Epsom, Surrey. Dep. £5 5s.

OCTOBER 26

LEEK RDC.—Construction of about 6,125 yd. of 5 in., 2,875 yd. of 4 in. and 8,975 yd. of 3 in. dia. spun-iron water mains, with fittings for same; a mass concrete reservoir of 75,000 gallons capacity at Heaton; a booster pumping station at Rudyard; and other incidental works in the Parishes of Rudyard, Heaton, Rushton Spencer and Rushton James. Willcox Raikes & Marshall, engrs., 33 Gt. Charles-st., Birmingham 3. Dep. £5 5s.

NOVEMBER 4

IRLAM UDC.—Construction of a pumping station and the laying of approx. 3½ miles of precast concrete sewer pipes from 15 to 45 in. dia., with manholes and other ancillary works. E&S. Dep. £5 5s.

GENERAL BUILDING WORK (LONDON)

CHELSEA.—Housing.—LCC have received a planning application from Stone, Toms & Ptnrs. for the erection of 22 houses at 1-43

(odd) Royal-ave., Chelsea.

HACKNEY.—Office Block.—LCC have received a planning application from Ellis, Clarke & Gallannaugh for the erection of an office block at Empire Music Hall, Mare-st.

HAMMERSMITH. — Housing. — A town planning application for a new housing scheme, comprising 26-storey blocks of flats, in the Latimer-rd. area (Hammersmith BC) has been received by the LCC.

HAMPSTEAD.—Housing.—T. P. Bennett & Son have applied for LCC planning permission to erect flats, houses and garages at 29-49 St. John's Wood-park, site C.

HAMPSTEAD.—Appointment of Architect. —The BC are to ask the Civic Trust to appoint Mr. L. Manasseh, ARIBA, AADipl., Bedford-st., WC2, to carry out certain preliminary work in connection with the proposed scheme for improvement at Hampstead High-st.

HOLBORN.—Housing and Office Development.—F. Boreham Son & Wallace have applied for LCC planning permission to erect a 14-storey building for showrooms, offices, flats and garages at 162-166 High Holborn/2-9 Museum-st./10-13 West Central-st.

LAMBETH.—Appointment of quantity surveyors.—P. T. Walters & Wheatley, chartered quantity surveyors, have been engaged by the MBC to carry out quantity surveying work in connection with the development of New Park-rd. site.

PADDINGTON.—Hotels and Shops.—The following town planning applications have been received by the LCC: Revised scheme for a 23-storey building for hotel and shops at Bayswater-rd./Lancaster-ter./Westbourne-st. (T. P. Bennett & Son); new 8-storey hotel at 29-43 Norfolk-sq. (Colderhead and Scobie).

ST. MARYLEBONE.—Shops and Offices, etc.—The following town planning applications have been received by the LCC: Conversion of offices to residential club at 11 Stratford-pl. (Daydon Griffiths—on behalf of the Oriental Club); redevelopment as shops, stores, garage, offices and flats at 150-162 Edgware-rd./15-19 Brendon-st. (Ardin and Brookes); rebuilding as a combined London Overseas Student Centre and residential flats at 11, 11a and 11b Portland-pl. (Clifford Culpin & Ptnrs).

WESTMINSTER.—General Development. The following town planning applications have been received by the LCC: Revised scheme for mechanical engineering building at Exhibition-rd/Imperial Institute-rd. (Norman & Dawbarn); eight-storey block of shops, offices and maisonettes with basement car park at 45 Park-la (Cotton, Ballard and Blow, in conjunction with the Architects Collaboration of Cambridge, Mass., USA); rebuilding as showrooms, galleries, flats and offices at 3-5 St. George-st., 32-35 New Bond-st. (Guy Morgan & Ptnrs.); reconstruction as four-storey car-parking building and three-storey workshop with stores, office and showroom building and a petrol filling station at 76, 77, 77a Grosvenor-rd./80-92 Bessborough-pl. (Sydney Clough, Son & Ptnrs.); phase II of extensions to the Airways Terminal, Buckingham Palace-rd. (BOAC); demolition of club and erection of a six-storey office block at 18 Hanover-sq. (Daydon Griffiths—on behalf of the Oriental Club).

(PROVINCIAL)

ACCRINGTON.—BC propose phase II of improvements to Town Hall. Est. £17,000. . . . CoE Auth. propose modernisation at Green Haworth sch.

ADDINGHAM.—BC propose erection of 35 houses at Moor Park.

ANDOVER.—Wessex Regional Hospital Bd. has approved in principle the building of a new out-patients' department at Andover War Memorial Hospital. Est. £30,000.

BARROW.—School building in Barrow-in-Furness during the next five years is scheduled to cost over £330,000. The new Holker County sec. sch., costing £66,308, is to be included in the current year's programme.

BASINGSTOKE.—Mr. F. H. Jackson has applied for planning permission to use 5.5 acres of land at Strathfieldsaye-rd., Sherfield-on-Lodden, for residential development. . . .

Contracts Placed

We are glad to receive from architects and quantity surveyors for publication details of contracts placed to the value of £20,000 or over. Such information should reach the Editor as soon as possible after the contract is signed. Names of the architect and other consultants associated should be given.

Mr. G. Lock has applied for planning permission to develop 13 acres of land at Packla., East Oakley, by erecting about 54 dwellings.

BELFAST.—The Northern Bank, Belfast, has purchased the premises of Sawers (Belfast) Ltd., and proposes to build a new bank on the site. It is believed that the deal involves about £200,000.

BIRKENHEAD.—Following for BC: Two blocks of 3-storey flats and seven garages at Apple Grove; 3 blocks of 14-storey flats, 26 garages and 3 electricity sub-stations at New Hey-rd.

BLANDFORD.—RDC to consider building two blocks of three-storey flats in new housing scheme for Stourpaine village. . . . Council is to support applications by H. Hawkins & Sons (Bournemouth) Ltd., to use land on Charlton Marshall Nursery estate for erection of 32 dwellings, and by Mr. B. C. Hunt to use land in White-la., Blandford, for erection of six dwellings. . . . Council's Engineer has produced outline sewerage scheme for villages of Durweston and Stourpaine. Est. £60,000.

BOURNEMOUTH.—Repairs costing about £50,000 are to be spent on a theatre at Bournemouth Pavilion.

BURNLEY.—BC propose erection of block of flats at Ebor-st. . . . Lancs. EC propose new sec. sch. at Coal Clough. . . . Drury Construction (North Western) Ltd. propose housing development at Eastern-ave./Deerpark-rd./Brunshaw-ave.

COLWYN BAY.—The Council have recommended planning approval for an outline application for 345 building plots for private housing on land on the golf course, Upper Colwyn Bay.

COSELEY.—UDC propose erection of 52 dwellings at Meadow-la.

DARLINGTON.—Development Com. has approved plans for 24 houses and 22 garages to be built on land to the north of Thompson-st. east. Building plans also approved include one for 18 council houses at the west end of Lyonette-rd.

DEAL.—TC have approved the erection of 300 flats in three and six-storey blocks on the 16-acre Walmer-pl. estate.

DERBY.—BC propose erection of 600 dwellings/shops at Alvaston.

DEVIZES.—MoE has intimated that he will give careful consideration to inclusion of a new grammar school for Devizes in the County's 1963/4 programme.

DURHAM.—CC is to build additional workshops at Durham Technical College at a cost of about £43,000. . . . Additions are proposed to Tow Law county jun. and infant sch. for the CC. Plans by County A. . . . Bakery additions are to be carried out at Gilesgate Moor for the Richmond Sausage Co. Architect is K. Dancer, of Stourbridge, Worcs.

ECCLES.—BC propose extensions to swimming baths.

GATESHEAD.—TC is being recommended to erect a new civic restaurant at the corner of High-st. and Park-la. The cost is estimated at £40,000. Boro' E is G. F. Winters.

GOSFORTH.—UDC has approved proposals for two county sec. schools for Northumberland EC. County A is C. C. Brown.

HARTLEY WINTNEY.—Mr. A. F. Pool has applied for planning permission to build 29 dwellings, with garages, at Brackley estate, off Brackley-ave.

HEANOR.—Ind Coope & Allsopp Ltd. propose erection of petrol filling station at High-st., Codnor. . . . W. A. Johnstone proposes housing development at Lacy Fields-rd. . . . National Coal Board propose erection of stores/offices at Ormonde colliery.

HENLEY.—MH&LG has given consent for high density development schemes, including high flats, at Henley. His decisions stem from an appeal by Townmakers Ltd. against refusal by Oxfordshire CC to permit the building of houses, maisonettes, studios, garages and a 25-storey tower block of flats on 6½ acres at Paradise-rd. The Minister's decision is subject to the block of flats not exceeding 15-storeys.

KENILWORTH (Warks.). — Rouncil Towers, a large Victorian house at Kenilworth, Warwickshire, is to be demolished and its site incorporated in a £350,000 residential development scheme. Sunshine Houses Ltd., of Birmingham, have secured the site, and intend to erect nearly 100 houses and flats on it. It is the last piece of land zoned for residential development on the south side of Kenilworth—now a dormitory town for Coventry and Birmingham. The ten-acre site will have a density of eight houses an acre.

LEEDS.—Shop & Stores Developments Ltd. propose erection of new premises at Butts Court.

MACCLESFIELD. — RDC propose civic centre at Park-la., Poynton.

MANCHESTER. — Following for TC: Modernisation at Whitworth baths, Openshaw, est. £23,310; erection of old people's home at Kirkmanshulme-la., Levenshulme.

NEWCASTLE-ON-TYNE. — H. Faulkner Brown, of Gosforth, has been appointed architect for a branch library at St. George's-cres. for City C. . . . MoAv has approved in principle a £500,000 scheme for extending the terminal buildings at Woolsington Airport for Newcastle Corpn. . . . City Housing Com. is planning the erection of 600 flatlets shortly. Also under consideration: plans for two 18-storey block of flats at Westgate-rd. City A is G. Kenyon. . . . The City Council, in conjunction with Durham CC, are to erect a low-level bridge across the Tyne. Work is not expected to start for two years. . . . MH&LG has approved in principle City C's draft plans for a new central library at Higham-pl./Saville-pl. Est. £485,000.

NORTH RIDING.—CC is to purchase a site at Pickering for the erection of a police station, court house and weights and measures office.

NORTHUMBERLAND. — MH&LG have approved proposals by Northumberland CC to establish a new town at North Killingworth, five miles from Newcastle-on-Tyne. The new town will have a population of about 17,000, and the CC is seeking compulsory powers to acquire the necessary land. . . . CC has prepared a revised scheme for old people's home at Merley Court, Morpeth, to cost £51,000. . . . The County Welfare Com. are considering schemes for welfare homes at Berwick and Ashington to accommodate 120 people and to cost £146,500.

OLDHAM.—Alice A. Kenyon Industrial Centre propose extensions to existing premises. . . . Following for BC: Development of 2½ acres of market ground; erection of branch library at Limeside estate.

OSWALDTWISTLE.—Lancs. EC propose extensions/adaptations at county sec. sch., Rhyddings.

OVER ALDERLEY.—Cheshire EC propose school extensions at School-la.

OXFORD.—New College, Oxford, is to be modernised. A new building will occupy site at northern end of Long Wall and will blend with existing pattern. An architect has been appointed.

RAMSBOTTOM.—UDC propose redevelopment of town centre.

READING.—MoE has given approval to establishment of a teachers' training college at Bulmershe, near Reading, with capacity of not less than 450 students. The College will probably be built in two instalments, first to be completed by 1964 and second by 1966.

REDCAR. — Thomas A. Crawford, 80 Borough-rd., Middlesbrough, is the architect for a proposed RC mod. sch. at Redcar.

ROTHERHAM.—Pearl Assurance Co. Ltd. propose erection of office block at Ship Hill.

ROYTON.—UDC propose housing development, south of Randle Hill-rd.

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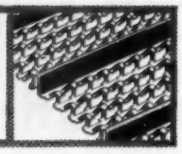

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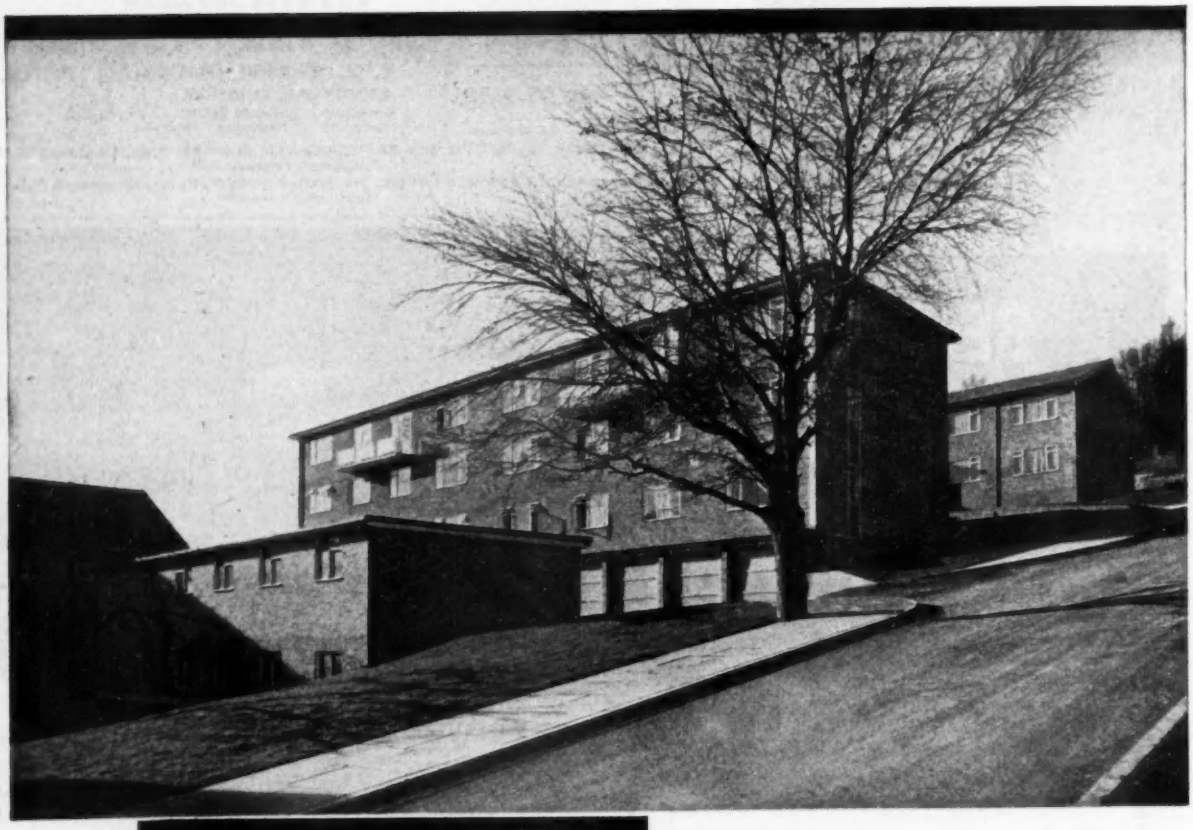

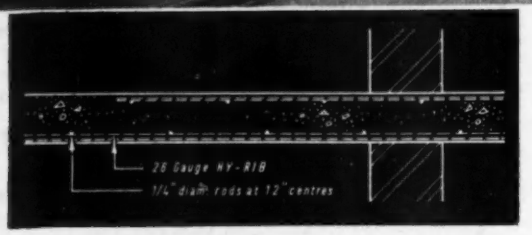

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SALFORD.—Following for TC: Luxury flats at Bury New-rd.; new premises at Broughton high sch., £220,000 est.; new technical high sch. adjoining Salford grammar sch., £240,000 est.; health clinic at Lower Kersal; new building at Sacred Heart RC sec. sch., £194,000 est.; phase II of Hope Hall sec. mod. sch., £153,000 est.; special sch. at Oaklands-rd., Kersal; phase I of Technical College at Peel Park, £500,000 est.

SEDGLEY.—M. E. Scott proposes the erection of a factory at Dormston trading estate. . . . Gibbons Bros. Ltd. propose office extensions at Dibdale Works.

SHEFFIELD.—TC propose housing development at East Bank-rd. . . . Seddon & Bramhall Ltd. propose erection of industrial premises at Main-st. . . . Following for Regional Hospital Bd.: New hospital at Oakwood Hall, Rotherham; new hospital at Ashgate, Chesterfield; provision of psychiatric hospital at Sheffield.

STAFFS.—Following for CC: Erection of 14 youth centres on various sites. Major school projects—CP sch. at Histons-la., Codsall; CS technical sch. at Stafford; CP sch. at Cotwall End, Sedgley; CP sch. at Manor-rd., Aldridge.

SUNDERLAND.—Boro' A (H. C. Bishop) has been asked by the Corporation Developments Com. to prepare a scheme for a new hall at Seaburn for dancing, skating, exhibitions, and conferences.

SWINDON.—Work is to begin within the next two or three months on the construction of a new shopping precinct on a site near the centre of Swindon, one side of which adjoins Regent-st. and another a dual carriageway forming part of the main road into the town. The work is expected to take two or three years to complete, and is expected to cost about £1m. It will provide 28 normal sized shops, three supermarkets, a large department store with an office block above it, and a licensed hotel which will include both a ballroom and banqueting rooms. Plans for the layout have been prepared by Messrs. Shingler and Risdon and the corporation have retained Mr. Frederick Gibberd as consultant architect-planner for the scheme.

THORNABY-ON-TEES.—North Riding EC propose alterations and additions to St. Patrick's RC prim. sch., Thornaby.

TOTTINGTON.—Kirklees Ltd. propose extensions to existing factory.

TYNEMOUTH.—TC is to carry out housing developments at North Shields on a site bounded by George-st./Charlotte-st./Hudson-st./Upper Toll-st. . . . The Tynemouth Squash Racket Club, 14 Bath-ter., Tynemouth, are to erect £10,000 headquarters at Billy Mill-la., North Shields, and have prepared their own plans.

WELLINGTON (Salop).—K. E. Millard & Co. Ltd. propose housing development at Ketley Town Farm.

WHITEFIELD.—Lancs. EC propose erection of nursery sch. at Thatch Leach-la.

WHITLEY BAY.—C. Solomon, 30 St. Mary's-pl., Newcastle-on-Tyne, has prepared plans for a bank and three flats at Front-st. . . . J. V. Spencer, 171 Albert-rd., Middlesbrough has prepared plans for 27 dwellings at Haddon Green.

TENDERS

(A) Denotes *accepted*.
(PA) Denotes *provisionally accepted*.
(RA) Denotes *recommended for acceptance*.
(AM) Denotes *accepted subject to modification*.
(GD) Denotes *accepted subject to approval by appropriate Government Department*.

BALLYCLARE (Co. Antrim).—External painting of 136 dwellings for Northern Ireland Housing Trust. (A) L. Kirkpatrick & Sons, 25 High-st., Antrim.

BEDFORD.—Erection of shops, maisonettes and flats at Brickhill for BC. (GD) Gambriel & Sugars Ltd., £51,449.

BERMONDSEY.—Extension to Block III (Norman House), Abbey-st. (North) housing site, comprising six dwellings, for BC. (A) Direct labour, £15,836.

BURY.—Erection of sec. mod. sch. at Seedfield for BC. (A) John Laing & Son Ltd., Mill Hill, London.

CHESHIRE. — Factory extensions for Murgatroyd's Sale & Chemical Co. Ltd., Elworth, Sandbach. Bernard Taylor & Associates, architects. Tozer & Ptnrs., quantity surveyors. (A) J. Gerrard & Sons Ltd., £100,000.

CROYDON.—Following for CBC: Erection of 44 housing units at Heathfield-rd. (A) J. Gerrard & Sons Ltd., £87,468. Erection of 20 housing units at Vermont/Highview-rds. (A) O. R. Croudace Ltd., £36,528. Erection of 20 housing units at Greenside-rd. (A) T. R. Roberts (Builders) Ltd., £34,780. Erection of 27 units of housing as Ely/Holmesdale-rd's. (A) A. J. Wait & Co. Ltd., £45,966. Erection of 15 housing units at Morland/Kennerton-rd's. (A) M. Howard (Mitcham) Ltd., £22,846.

DOWNPATRICK (Co. Down).—Erection of 40 dwellings and 29 garages at Kary Hill site for Northern Ireland Housing Trust. (A) H. J. O'Boyle, Ltd., Irish-st., Downpatrick. Est. £90,000.

ECCLES.—Erection of 18 flats at Nelson-st. and 84 flats at Philip-st. for BC. (A) G. & J. Seddon Ltd., Walkden, Manchester. £188,560.—Erection of 90 flats on various sites for BC. (A) Henry Daniels & Son (Building Contractors) Ltd., Urmston, £171,101.

EDINBURGH.—Roadworks in connection with the abandonment of the tramways for Corpn. (A) G. Wimpey & Co. Ltd., £65,000.

ESTON.—Erection of 204 houses at Church-la. estate for UDC. (A) Stephen Coates, Ltd., North Ormesby, Middlesbrough.

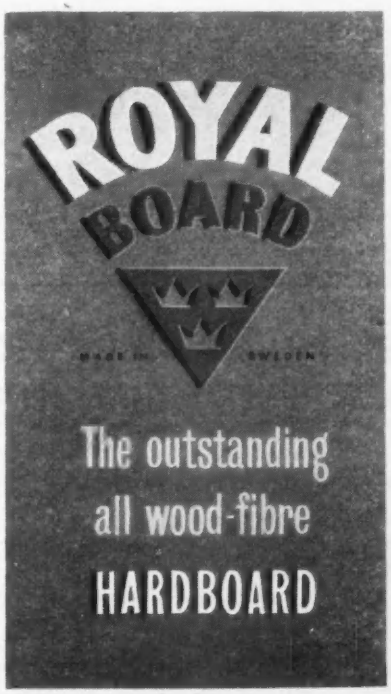
HARLOW.—Erection of 210 dwellings and 52 garages at Howard Way, Harlow, for the Development Corpn. V. Hannett, architect. (A) The Rush & Tompkins-Pauling Group, £380,000.

HORNSEY.—External redecoration of seven blocks of flats at 'Hillcrest' for BC. (A) Burnham & Bainbridge, 631 Green-la., N8.

HOYLAKE.—Erection of the Blue Anchor Hotel, Market-st., for Birkenhead Brewery Co. Ltd. (A) F. Clark & Sons Ltd., Liverpool.

HULL.—Construction of r.c. piled and decked quay and four steel-framed transit sheds, with extensive rail and road works, on the north side of the King George Dock for the British Transport Commission. (A) A. Monk & Co. Ltd., Padgate, Warrington.

LEWISHAM.—Following for BC: Erection of six flats, six maisonettes, eight houses and nine garages, at Nelgarde-rd./Holbeach-rd. / Silvermere-rd. / Engleheart-rd. (GD) Greenaway & Son Ltd., £44,005. Erection of 21 flats, three houses and 27 garages at Bargery-rd./Sangley-rd. (GD) Henry Kent (Builders) Ltd., £62,365.



LIVERPOOL.—New premises at Townsend-ave. for West Lancs. T. & A.F. Assn. (A) Rimmer Bros. (Liverpool) Ltd.

(GD) LONDON (Admiralty). — Contracts over £4,000 in value: *Pembrokeshire:* Painting; Ian Williams & Co. Ltd., Cardiff. *Kent:* Extension to building; Wraight (Sittingbourne) Ltd., Sittingbourne. Sheet piling; J. W. Ellingham Ltd., Maidstone. *Co. Durham:* Renewal of timber decking; Eagre Construction Co. Ltd., Scunthorpe. *Essex:* Cable ducts, pit foundations, huts, etc.; J. Murphy & Son Ltd., London, N4. *Kent:* Reconstruction of roads, paths, and rail-track; Bensted Contractors Ltd., Maidstone.

(GD) LONDON (Air Ministry).—Contracts to the value of £4,000 or over for week ended September 23: *Building work:* Coningsby, Lincs.; J. T. Barber & Son, 40 Hessle-ave., Boston, Lincs. Alconbury, Hunts.; C. Miskin & Sons Ltd., Romeland, St. Albans, Herts. Honington, Suffolk; A. Monk & Co. Ltd., PO Box No. 4, Stamford, Lincs. Northwood, Middx.; W. H. Streeter Ltd., 10 Tudor-rd., Hampton, Middx. *Surfacing existing paved areas:* Thorney Island, Hants.; Constable Hart & Co. Ltd., Lower Drayton-la., Cosham, Portsmouth, Hants. *Surfacing existing taxiways:* Ballykelly, Northern Ireland; Constable Hart & Co. Ltd., Lion-hse., Richmond, Surrey. *Artificers' work:* Bawtry, Yorks., etc.; G. G. Middleton & Sons Ltd., 32 Gateford-rd., Worksop, Notts. Old Sarum, Wilts, etc.; Willcocks & Stephens Ltd., Lower Polsham-rd., Paignton, Devon. Bishops Court, County Down, N. Ireland; F. Parkinson Ltd., Mowbray-dr., Blackpool, Lancs. Gaydon, Warwicks.; Lewis & Watters Ltd., Lime-ave., Lillington, Leamington Spa, Warwicks. Ternhill (Shropshire), etc.; Lewis & Watters Ltd., Lime-ave., Lillington, Leamington Spa, Warwicks. Hendon (London), Northwood (Middx.), etc.; Haymills (Contractors) Ltd., Empire-hse., Hanger Green, Western-ave., London, W5. *Provision of new buildings, concrete foundations, etc.:* Horham, Suffolk; Haymills (Contractors) Ltd., Empire-hse., Hanger Green, Western-ave., London, W5. *Provision of concrete foundations for steel towers:* North Luffenham, Rutland, etc.; A. J. G. Potter & Sons Ltd., High-st., Stanwick, Wellingborough, Northants. *Electrical installations (internal):* Scampton, Lincs.; Williams Bros. (Electrical) Ltd., 32a Temple-st., Wolverhampton.

(GD) LONDON (British Railways).—Contracts placed by Southern Region: *Wimbledon Station:* Repairs to roofs; Macartney & Sons, London, SW9. *Kingston Station:* Repairs to roofs; Durable Asphalte Co. Ltd., London, N1. *Waterloo Station:* Repairs to roofs; Durable Asphalte Co. Ltd., London, N1. *Greenwich Royal Hill:* Removal of bridge and reinstatement of highway; Harry Neal Ltd., London, W1. *Hurst Green New Station:* Construction of new station buildings, platform roofing and ancillary works; Truett & Steel Ltd., Thornton Heath, Surrey.

(GD) LONDON (British Railways).—New London Midland Region contracts: Fencing renewal programme in Manchester district for 1960; J. B. Corrie (Flextella) Ltd., London, SW7. Fencing renewal programme in Northampton district for 1960; A. J. Binns Ltd., London, N1. Reconstruction of booking and inquiry offices at Chester General Station; Morton Browne Ltd., Chester. Erection of progress office at Crewe locomotive works; Seddon (Stoke) Ltd., Stoke-on-Trent. Repairs of repointing to brickwork at Gilbrook Viaduct, Awsworth; John E. B. Wheatley Ltd., Kirkby-in-Ashfield.

(GD) LONDON (MoW).—Contracts placed for week ended September 10: *Buckinghamshire:* Erection of houses and staff hostel at Psychiatric Prison, Grendon Underwood; Turriff Construction Corpn. Ltd., Budbrooke-rd., Warwick. *London:* Erection of Customs & Excise office, Surrey Dock; Pugett Construction Co. Ltd., 5 Wrestlers-court., Camomile-st., E.C.3. Erection of goods lift at Government Offices, Gt. George-st., SW1; Evans Lifts Ltd., Abbey-la., Leicester. *Warwickshire:* Alterations to Branch Post Office,

Norfolk-hse., Smallbrook-st., Birmingham; A. J. Gupwell (Shopfitters) Ltd., 123 Bradford-st., Birmingham 12. *Yorkshire:* Erection of telephone exchange, Garden-st., Mexborough; Fred. Pearson & Co. Ltd., 32 Cemetery-rd., Doncaster.

(GD) LONDON (MoW).—Contracts placed for week ended September 17: *Cheshire:* Erection of concrete and brick boundary walls at Roman Amphitheatre, Chester; Thomas Warrington & Sons Ltd., 82 Station-rd., Ellesmere Port, Cheshire. *Essex:* Erection of Buckhurst telephone exchange extension; Charles S. Foster & Sons Ltd., 9-17 High Beech-rd., Loughton, Essex. *Lanarkshire:* Erection of Post Office engineering depot, Shields-rd., Motherwell; A. A. Stuart & Sons Ltd., 2275 London-rd., Carmyle, Glasgow, E2. *London:* Completion of Belgravia BPO, 4-5 Chester Mews, SW1; E. J. Lacy & Co. Ltd., Steele-rd., NW10. Erection of passenger lift at Whitehall Offices, SW1; Keighley Lifts Ltd., Yorkshire. *Somerset:* Alterations to Head Post Office, Shepton Mallet; Stone & Co. (Bristol) Ltd., Redland-rd., Bristol 6.

(GD) LONDON (War Dept.).—Recent contracts placed: *Berkshire:* Electrical work at Reading; Cawdells of Luton Ltd., Luton. *Devon:* Miscellaneous at Honiton; Humphreys Ltd., Plympton. *Hampshire:* Insulation at Crookham; Thermac Insulations Ltd., London, SW1. *Middlesex:* Miscellaneous at Hounslow; H. Goodsell & Son Ltd., Maidstone. *Somerset:* Redecoration at Taunton; T. H. Kenyon & Sons Ltd., London, W9. *Warwickshire:* Building at Sutton Coldfield; Wilson Lovatt & Sons Ltd., Wolverhampton. *Yorkshire:* Roadwork at Catterick Camp; W. & J. Glossop Ltd., York. Building at Catterick Camp; F. Shepherd & Son Ltd., Richmond, Yorks.

MANCHESTER. — Construction of a traverser pit for alterations to assembly shops at the locomotive works of Beyer Peacock Gorton Ltd. (A) J. Gerrard & Sons Ltd., Swinton, Lancs.

MANCHESTER.—Factory extension at Gibbon-st. for Francis Shaw & Co. Ltd. (A) David Walton & Co. Ltd., Manchester.—New factory at Shentonfield-rd., Northenden, for Calthena Ltd. (A) P. Hamer Ltd., Swinton.—Office block at Cheetwood-rd. for H. Marks Ltd. (A) G. & J. Seddon Ltd., Walkden, Manchester.

MIDDLESBROUGH.—Alterations to shop and showroom at Newport-rd. for Marks Ltd., house furnishers. (A) C. Tennet (Contractors) Ltd., 74 Church-rd., Middlesbrough.

NORTH RIDING.—Additions to county police headquarters at Northallerton for CC. (A) R. B. A. Moody Brothers (Contractors) Ltd., 18 East-rd., Northallerton, £15,500.

OSWESTRY.—Erection of 15 bungalows at Middleton-rd. for BC. (A) D. G. Clark, Pontfadog, Wrexham, £20,291.

ROTHERHAM.—Dispensary extensions at Rotherham Hospital for Sheffield Regional Hospital Bd. (A) Chadwick & Co. (Rotherham 1931) Ltd.

SHEFFIELD.—New premises at Scotland-st. for John Turton & Co. Ltd. (A) Reeves Charlesworth Ltd.

SOUTHAMPTON.—Erection of 136 flats at Redbridge Triangle for CBC. (A) G. T. Crouch Ltd., Crawley, £255,376.

STRETFORD.—New warehouse at Park-rd. for Kellogg Co. of Gt. Britain Ltd. (A) J. Gerrard & Son Ltd., Swinton.

TYNEMOUTH.—Erection of branch library, with two flats above, at Coast-rd., Billy Mill, North Shields, for TC. (A) R. Sleightholme Ltd., St. Oswin's-pl., Tynemouth.

WALTHAMSTOW.—Following for BC: Erection of nine one-bed. and three two-bed. flats at Mile End-hse. (A) P. G. Evans & Son Ltd., £20,314. Erection of stage II of the Hoe-st. redevelopment, comprising shops and offices. (GD) Whyatt Builders Ltd., £135,037.

WANDSWORTH.—Following for MBC: Erection of 49 flats in two seven-storey blocks at Roupell Park estate, Upper Tulse Hill. Clifford Culpin, architect. (A) Rush & Tompkins Ltd., £154,000. Erection of eight maisonettes and 110 flats at West Hill. V. Hamnett, architect. (A) Rush & Tompkins Ltd., £340,000.

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CONTRACTORS for the BOILER HOUSE CHIMNEY at MALORY COMPREHENSIVE HIGH SCHOOL, LEWISHAM.

(Illustrated in this issue)

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ATTENTION ADVERTISERS

Classified advertisements in this section can be accepted up to 12 o'clock noon on the TUESDAY prior to issue. It is regretted that advertisements cannot be accepted by telephone.

CONTRACTS

NEWHAVEN
URBAN DISTRICT.

Applications are invited from Builders and Contractors wishing to be included in a Selected List of Contractors to be invited to TENDER for carrying out WORKS OF IMPROVEMENT AND EXTENSION TO THE COUNCIL OFFICES.

Documents for this work will be ready by 31st OCTOBER, 1960, and will be returnable by the 29th November, 1960. Applications for inclusion in the list should be received by the undersigned not later than NOON on TUESDAY, 18th OCTOBER, 1960.

Outline particulars of this work can be obtained from the Council's Architects, Messrs. Underdown and Whinnett, 22 Cornfield-road, Eastbourne.

N. C. SIMPSON,
Clerk of the Council.

Council Offices,
Newhaven.

MANSFIELD
BOROUGH.

BULL FARM HOUSING ESTATE.
CONTRACT 32—EIGHT TRADITIONAL BUNGALOWS.

TENDERS are invited for the ERECTION OF EIGHT ONE-BEDROOM TRADITIONAL BUNGALOWS.

Drawings may be inspected and Bills of Quantities, Forms of Tender, General Conditions of Contract and other relevant documents obtained from Mr. F. T. Crowe, B.Sc., A.M.I.C.E., Borough Engineer and Surveyor, Carr Bank, Mansfield, on payment of a deposit of two guineas (£2 2s. 0d.) made payable to the Town Council of Mansfield, which will be refunded on receipt of a bona fide Tender not subsequently withdrawn, or the return of all loaned documents. Documents will be available on and after Friday, 23rd September, 1960.

Tenders will only be considered if they are submitted in the envelope provided, which will be suitably endorsed and addressed. This must be sealed and delivered to the undersigned not later than 12 NOON on WEDNESDAY, 19th OCTOBER, 1960.

The Corporation does not bind itself to accept the lowest or any Tender and the provisional acceptance of a Tender will be subject to the approval of the Ministry of Housing and Local Government.

A. C. SHEPHERD,
Town Clerk.

Carr Bank,
Mansfield.

LEOMINSTER
BOROUGH.

ERECTION OF OLD PEOPLE'S BUNGALOWS, ETC., SYDONIA SITE.

Builders and Contractors are invited to TENDER for the ERECTION OF 25 OLD PEOPLE'S BUNGALOWS, A LAUNDRY, BEDROOM BLOCK, COMMUNITY CENTRE AND WARDEN'S FLAT on the above-mentioned Site in accordance with the drawings and specification prepared by the Borough Surveyor, Mr. Hy. Schofield, M.I.Mun.E.

Applications for Tender documents should be made to the Borough Surveyor at the undermentioned address accompanied by a deposit of three guineas which will be refunded upon receipt of a bona fide Tender and/or the return of all documents.

Sealed Tenders endorsed "Bungalows" must be delivered to the undersigned not later than 12 o'clock NOON, on TUESDAY, the 25th OCTOBER, 1960.

The Council do not bind themselves to accept the lowest or any Tender, and the acceptance of any Tender is subject to the sanction of the Ministry of Housing and Local Government.

K. DOWNS,
Town Clerk.

Municipal Offices,
Grange Court,
Leominster.
23rd September, 1960.

HEATING CONTRACTORS.

FIXED PRICE TENDERS are invited for carrying out the RE-ORGANISATION OF BOILERHOUSE (INCLUDING SUPPLY OF CAST-IRON SECTIONAL BOILER) at the Haugh Shaw Secondary School, Halifax.

Applications for Form of Tender and Drawings, accompanied by a deposit of £2 (which will be refunded on receipt of a bona fide Tender and other Contract documents), must be made to Leake & Wilson at the undermentioned address not later than 12 NOON on the 10th OCTOBER, 1960.

Cheques should be made payable to Halifax Corporation.

A copy of the Conditions of Tender, Conditions of Contract and Drawings may be inspected at the office of Leake & Wilson, or

The Town Clerk, Town Hall, Halifax.

Sealed Tenders in an endorsed envelope to be returned to the Town Clerk not later than 31st OCTOBER, 1960.

LEAKE & WILSON,
Consulting Engineers.

Oriel Chambers,
27 High-street,
Hull.

SALFORD CITY.

PROPOSED ADMINISTRATIVE OFFICES.
FOR THE HEALTH DEPARTMENT, CRESCENT, SALFORD, 5.

Firm Price TENDERS are invited for the PROPOSED MULTI-STOREY BLOCK OF ADMINISTRATIVE OFFICES at Crescent, Salford, 5.

Conditions of Contract and Drawings may be inspected at, and Bill of Quantities and Form of Firm Price Tender obtained from, the City Engineer and Surveyor's Department, Town Hall, Salford 3, on payment of a deposit of £5 5s. 0d., which will be returned on submission of a bona fide Firm Price Tender not subsequently withdrawn.

Firm Price Tenders on the prescribed Form, sealed in the envelope provided and bearing no other mark or identification, must be forwarded to the undersigned so as to be received not later than 10 a.m. on MONDAY, 24th OCTOBER, 1960.

The Council does not bind itself to accept the lowest or any Firm Price Tender.

R. RIBBLESDALE THORNTON,
Town Clerk.

BEXHILL
BOROUGH.

ALTERATIONS TO SWIMMING POOL EGERTON PARK, BEXHILL.

TENDERS are invited for certain ALTERATIONS TO THE SWIMMING BATHS, Egerton Park, Bexhill, to be carried out in two stages; the work comprised in this the first stage consists of a PROPOSED NEW ENTRANCE HALL, TICKET OFFICE, CHANGING ACCOMMODATION AND KITCHEN, TOGETHER WITH OTHER ANCILLARY WORK and NEW SERVICES and SURROUND TO THE EXISTING POOL.

Plans, Bills of Quantities and Form of Tender can be obtained from the Borough Surveyor, Town Hall, Bexhill, Sussex, upon deposit of two guineas, which will be returned upon the receipt of a bona fide Tender, not subsequently withdrawn and the return of all documents.

Applications should be made forthwith and Tenders must be delivered in the official sealed envelope to the undersigned not later than 9 a.m. on SATURDAY, 22nd OCTOBER, 1960, and not bearing any name or mark to indicate the sender.

The Council does not bind itself to accept the lowest or any Tender.

EDWARD SMITH,
Town Clerk.

Town Hall,
Bexhill-on-Sea,
Sussex.

WALTON AND WEYBRIDGE
URBAN DISTRICT COUNCIL.

ST. MARY'S-ROAD HOUSING SITE.
ERECTION OF 6 FLATS.

TENDERS are invited for the ERECTION OF 6 FLATS IN ONE 2-STOREY BLOCK in Adelaide-place, St. Mary's-road, Weybridge.

Bills of Quantities and Form of Tender can be obtained from, and Conditions of Contract seen, at the office of the Engineer and Surveyor to the Council, Council Offices, Walton-on-Thames, after the 30th SEPTEMBER, 1960.

Tenders are to be enclosed in plain sealed envelopes endorsed "6 Flats, Adelaide Place" and delivered to the undersigned not later than 5 p.m. on TUESDAY, the 18th OCTOBER, 1960.

EDWARD G. HUBBARD,
Clerk of the Council.

Council Offices,
Walton-on-Thames.
September, 1960.

WARRINGTON
COUNTY BOROUGH.

TO BUILDERS AND CONTRACTORS.

The Housing Committee of the Council of the County Borough of Warrington is prepared to receive TENDERS for the ERECTION AND COMPLETION OF 20 HOUSES AND 2 BUNGALOWS (SCHEME 166) AND 14 HOUSES AND 4 BUNGALOWS (SCHEME 167) both contracts on the Orford Neighbourhood Unit.

Drawings, specifications, etc., may be seen, and forms of tender, bills of quantities, and all further information obtained at the office of the Borough Surveyor, Town Hall, at which place Tenders must be delivered before 5 p.m. on FRIDAY, the 7th day of OCTOBER, 1960.

A deposit of £5 5s. will be required in respect of each contract, and contractors are requested to state, if tendering for one contract only, which particular set of documents they require.

The deposits will be refunded on receipt of bona fide Tenders.

The lowest or any Tender not necessarily accepted.

J. Y. HUGHES, M.I.C.E.,
Borough Engineer and Surveyor.

Borough Engineer and Surveyor's Office.
14th September, 1960.

WEST SUSSEX
COUNTY COUNCIL.

Contractors wishing to submit a FIXED PRICE TENDER for either of the undermentioned schemes, are invited to apply for permission to tender; such applications, stating for which scheme(s) they wish to tender, to be addressed to the County Architect, County Hall, Chichester, to reach him not later than 10th OCTOBER, 1960.

(a) ADDITIONAL LAVATORIES, GREENHOUSE, ETC., at Horsham High School for Girls (Job No. 6262).

(b) EXTENSIONS to Lancing Secondary Modern School (Job No. 6446).

(c) STAGE ONE EXTENSIONS to Southwick Kings Manor Secondary Modern Girls' School (Job No. 6323).

Quantities will be issued on or about 1st NOVEMBER, 1960, for (a), 1st DECEMBER, 1960, for (b), and 29th DECEMBER, 1960, for (c).

The County Council does not bind itself to accept the lowest or any tender, and the firm whose tender is accepted must be prepared to enter into a contract in a form to be prepared by me.

T. C. HAYWARD,
Clerk of the County Council.

County Hall,
Chichester.

BIRMINGHAM CITY

TO BUILDING CONTRACTORS.

CONTRACT 716—20 BUNGALOWS, HOLLYBANK-ROAD, KINGS HEATH.
CONTRACT 725—11 TWO-STOREY DWELLINGS, ADAMS-HILL, BARTLEY-GREEN.

The House Building Committee invite Firm Price TENDERS for the ERECTION OF THE ABOVE.

Bills of Quantities and Forms of Tender will be forwarded on payment of £2 2s. 0d. for each contract at the office of A. G. Sheppard Fidler, City Architect, Civic Centre, Birmingham, 1, to whom all cheques should be made payable. Applications should be made by 4th October, 1960. Conditions of Contract (which include the usual Fair Wages and Conditions of Labour Clause) may be seen at the City Architect's Office during normal working hours.

The deposits will be returned on receipt of bona fide Tenders or on notification of inability to Tender, together with the return of the documents not later than three days before the date for receipt of Tenders.

Tenders, enclosed in the envelope provided for the purpose, must be sealed and delivered to the Town Clerk's Office (Room No. B.31), Council House, Birmingham, 1, not later than 12 NOON on WEDNESDAY, the 2nd NOVEMBER, 1960. Tenders received after that time will be rejected.

The Committee do not bind themselves to accept the lowest or any Tender.

T. H. PARKINSON,
Town Clerk.

The Council House,
Birmingham, 1.

SOUTHAMPTON
COUNTY BOROUGH.

Southampton C.B.C. invites TENDERS for the following contracts on bills of quantities available early in October.

Contract B.356—95 TRADITIONAL HOUSES, Thornhill Estate.

Contract B.354—4 TRADITIONAL HOUSES, Gover-road, Millbrook.

Contract B.357—140 FLATS IN TRADITIONAL CONSTRUCTION IN NO. 7 FIVE-STOREY BLOCKS, TYPES A.5 AND B.5, Thornhill Estate.

Application for Tender documents should be received by the Borough Engineer, Civic Centre, Southampton, not later than 10 a.m. on MONDAY, 10th OCTOBER, 1960.

ORPINGTON
URBAN DISTRICT COUNCIL.

PUBLIC CONVENIENCES,
HIGH-STREET, ST. MARY CRAY.

The Council invites FIRM PRICE TENDERS for the ERECTION OF PUBLIC CONVENIENCES of approximately 620 sq. ft.

Specification, Drawings and Form of Tender may be obtained on application to me on payment of a deposit of £2 which will be returned on receipt of a bona fide Tender, together with all documents supplied, and not subsequently withdrawn.

All applications to tender must be received not later than MONDAY, 10th OCTOBER, 1960. No application will be accepted after that date. The documents for tendering will be sent out on or about FRIDAY, 14th OCTOBER, 1960.

Conditions of Contract may be inspected at my office by all persons having made the necessary application to tender.

Tenders, on the prescribed form in the envelope provided, must be delivered to the office of the Clerk of the Council, Council Offices, Crofton-road, Orpington, Kent, not later than 12 noon on the 10th NOVEMBER, 1960.

The Council does not bind itself to accept the lowest or any Tender.

L. W. FREEMAN,
Engineer and Surveyor.

Civic Offices,
The Walnuts,
High-street,
Orpington,
Kent.

MANCHESTER
CORPORATION
TRANSPORT DEPARTMENT.

NEW HEAD OFFICE BUILDING.

The Transport Committee invite TENDERS for the DESIGN AND SUPPLY OF STEEL BAR REINFORCEMENT for the reinforced concrete structure for new office building, Hyde-road, Manchester, 12, having an aggregate floor area of some 50,000 sq. ft. distributed over five floors, designed with an in situ reinforced concrete frame and precast and in situ concrete floors. The extent of the work required to be covered in the Tender will be as follows:

(1) The structural design of the complete frame and floor system.

(2) The preparation of schedules and drawings in sufficient detail to allow the main contractor to fix the reinforcement.

(3) The supply only of steelwork bent and prepared ready for fixing.

(4) The testing of concrete samples.

Tenders will be on a fixed price basis.

Tender documents obtainable from the General Manager, Manchester Corporation Transport Department, 55 Piccadilly, Manchester, 1, will be issued on or about 7th OCTOBER, 1960, and are returnable by 10 a.m., 28th OCTOBER, 1960.

HESTON AND ISLEWORTH
BOROUGH.

RECONSTRUCTION,
BRIDGE-ROAD DEPOT,
STAGE II.

TENDERS are invited for the ERECTION OF THE SECOND STAGE OF A NEW WORKS DEPOT, comprising LARGE GARAGE AND BUILDING WORKSHOPS.

Firms wishing to tender should make application to Borough Surveyor, 88 Lampton-road, Hounslow, with a deposit of two guineas which will be refunded on receipt of a bona fide tender not subsequently withdrawn.

Tender form and Bills of Quantities will be forwarded on or about 10th OCTOBER, 1960.

Tenders must be received by me in the envelope provided by 10 a.m., on FRIDAY, 4th NOVEMBER, 1960.

The Council are not bound to accept any tender.

D. MATHIESON,
Town Clerk.

Town Hall,
Hounslow,
Middlesex.

SUFFOLK AND IPSWICH
FIRE AUTHORITY

PROPOSED FIRE STATION,
COLCHESTER-ROAD, IPSWICH.

TENDERS are invited for the ERECTION OF A NEW FIRE STATION at Colchester-road, Ipswich. Applications for Bills of Quantities and Tender Forms are to reach the offices of the Architects, Messrs. Johns, Slater & Haward, F./A.R.I.B.A., of 32 Foundation-street, Ipswich, not later than 17th OCTOBER, 1960, and should be accompanied by a £1 2s. deposit, returnable upon receipt of a bona fide tender. Plans can be inspected at the offices of the Architects during the tendering period.

Tenders in plain sealed envelopes bearing the words "Tender for Colchester-road Fire Station, Ipswich" but with no name or mark to indicate the sender must be sent to G. C. Lightfoot, Esq., Clerk of the Authority, County Hall, St. Helen's-street, Ipswich, not later than the 12th DECEMBER, 1960.

NORTON-RADSTOCK
URBAN DISTRICT COUNCIL.

ERECTION OF 40 DWELLINGS AT RADSTOCK.

The Council invite TENDERS for the ERECTION OF 40 DWELLINGS at Springfield, Radstock (comprising 3-STOREY FLATS AND MAISONETTES, 2-STOREY FLATS, and BUNGALOWS) and the ERECTION OF 10 GARAGES, TOGETHER WITH THE CONSTRUCTION OF ROADS, SEWERS AND ASSOCIATED SITE WORKS.

Tendering documents can be obtained from the Council's Architects, Messrs. Redwood, Miles and Wills, of 18 Great George-street, Bristol, 1, and applications for documents must be accompanied by a cheque for Five Pounds made payable to the Norton-Radstock Urban District Council. This deposit will be refunded upon receipt of a bona fide Tender, not subsequently withdrawn, and the return of all documents.

Tenders must be delivered to the undersigned not later than 12 o'clock NOON on SATURDAY, the 5th NOVEMBER, 1960, in the endorsed envelope provided for the purpose.

The Council do not bind themselves to accept the lowest or any Tender.

NORMAN H. PRATTEN,
Clerk of the Council.

Council Offices,
Midsomer Norton,
Bath.
30th September, 1960.

DISPOSAL OF RED SHALE.

The National Coal Board through their No. 1 (North Staffs) Area of the West Midlands Division, invite TENDERS for the EXCLUSIVE RIGHT TO WORK AND CARRY AWAY RED SHALE CONTAINED IN A DISUSED SPOIL HEAP AT MADELEY COLLIERY in the County of Stafford.

This Spoil heap comprises an area of about 11 acres, with access to main roads.

The whole of the spoil heap is required to be removed down to original ground level in a period of three years from the date of the commencement of the Licence.

Tenders are to be submitted by 17th OCTOBER, 1960.

For further particulars and for a copy of the Tender documents and other information, please apply to the Area Purchasing and Stores Manager of the Board's No. 1 Area (North Staffs) at York Chambers, Kingsway, Stoke-on-Trent, Staffs. (Tel. No.: Stoke-on-Trent 44086.)

The Board have deposits at other collieries in the Area, and enquiries are invited.

WING
RURAL DISTRICT COUNCIL.

TENDERS are invited for the ERECTION of the following dwellings at Church-lane, Cheddington:

ONE PAIR TYPE "S" HOUSES, together with drainage and site works.

Bills of Quantities and Forms of Tender may be obtained from the Council's Architect, Mr. H. A. Rolls, 15 Bridge-street, Leighton Buzzard, on payment of a deposit of £2 2s., returnable on receipt of a bona fide tender or the return of the documents. Cheques must be made payable to "Wing Rural District Council."

Tenders in plain sealed envelopes, endorsed "Tender for Houses" must be delivered to the undersigned by the first post on TUESDAY, 25th OCTOBER, 1960.

The Council does not bind itself to accept the lowest or any tender.

K. F. YOUNG,
Clerk of the Council.

Brooklands,
Linslade,
Leighton Buzzard.

NORTHAMPTONSHIRE
COUNTY COUNCIL.

BRACKLEY MAGDALEN COLLEGE SCHOOL.

TENDERS will be invited shortly for EXTENSIONS COMPRISING A TWO-STOREY BLOCK IN STONE AND BRICKWORK CONSTRUCTION. Contractors wishing to tender for (a) ERECTION, (b) HEATING, DOMESTIC HOT AND COLD WATER INSTALLATIONS or (c) ELECTRICAL INSTALLATION, are asked to notify the County Architect, County Hall, Northampton, by MONDAY, 10th OCTOBER. From the names received the committee concerned will select firms to whom particulars will be sent.

J. ALAN TURNER,
Clerk of the County Council.

County Hall,
Northampton.

WANSTEAD AND WOODFORD
BOROUGH.

CHAIN LINK FENCING.

TENDERS are invited for the SUPPLY AND ERECTION OF APPROXIMATELY 450 YARDS, 5 FT. CHAIN LINK FENCING AND ANGLE IRON GATES at Broadmead-road, Woodford Green. Tender documents may be obtained from the Borough Engineer, Municipal Offices, E.18, upon payment of £2 deposit, returnable on receipt of bona fide Tender, by NOON on 14th OCTOBER, 1960.

SURREY
COUNTY COUNCIL.

TENDERS FOR PROPOSED NEW "BAROSSA" COUNTY SECONDARY SCHOOL AT CAMBERLEY.

The work consists of the ERECTION OF A STEEL-FRAMED BUILDING IN ONE, TWO AND FOUR STOREYS TO PROVIDE CLASSROOMS, PRACTICAL ROOMS, WORKSHOP BLOCK, ASSEMBLY HALL, GYMNASIUM AND KITCHEN AND DINING ROOM, to cost about £200,000.

Tenders will be invited on a firm price basis and Tender documents will be available about 14th November, 1960. The contract period proposed is 94 weeks.

Contractors wishing to Tender should apply to the County Architect, County Hall, Kingston upon Thames by 6th OCTOBER, 1960.

ESSEX
COUNTY COUNCIL.

COLCHESTER PRETTYGATE COUNTY INFANTS' SCHOOL.

Contractors wishing to submit a FIRM PRICE TENDER for the ERECTION of the above should forward their names, from which a panel will be chosen and provided with tender documents.

The work consists of a single-storey building with steel frame and load bearing brickwalls, estimated cost £42,000.

Applications to reach the undersigned not later than 8th OCTOBER, 1960.

H. CONOLLY, C.B.E., F.R.I.B.A.,
County Architect.

County Hall,
Chelmsford.

WEST RIDING OF YORKSHIRE
COUNTY COUNCIL.

TENDERS are invited for the ERECTION OF A CLINIC at Thurnscoe.

Applications to Tender must be addressed to the County Architect, Bishopgarth, Westfield-road, Wakefield, and received not later than the 14th OCTOBER, 1960.

The contract will be under the R.I.B.A. Conditions and Form of Agreement.

Sealed Tenders must be addressed to me, the undersigned and received at Room 5, County Hall, Wakefield, not later than 12 NOON on the 14th NOVEMBER, 1960.

BERNARD KENYON,
Clerk of the County Council.

NEWCASTLE
REGIONAL HOSPITAL BOARD.

BERWICK INFIRMARY.

The Board proposes to ERECT A NEW WARD BLOCK AND PHYSIOTHERAPY DEPARTMENT AT THE ABOVE HOSPITAL. The extensions will be of single-storey construction with brick walls and timber roofs and will contain an approximate floor area of 11,000 sq. ft.

TENDER documents will be ready for issue to Contractors during October, 1960, and it is expected that it will be possible for the building operations to commence in January, 1961.

The project has been planned by and will be carried out under the direction of the Regional Architect, Mr. P. H. Knighton, M.B.E., A.R.I.B.A.

Contractors wishing to Tender for this work are asked to submit their names to the Secretary of the Board, Benfield-road, Newcastle upon Tyne, 6, not later than 6th OCTOBER, 1960. A limited number of Contractors may be selected and asked to Tender, but the lowest or any Tender will not necessarily be accepted.

NEW SARUM CITY.

STRATFORD-ROAD, SALISBURY.

TENDERS are invited for the CONSTRUCTION OF TEN HOUSES AND FOUR FLATS, TOGETHER WITH OUTBUILDINGS, PAVINGS, DRAINAGE AND ALL ANCILLARY WORKS at Stratford-road, Salisbury.

Tenders are to be on a "Fixed Price" Basis and on Bills of Quantities which will be available on SATURDAY, 8th OCTOBER, 1960. Copies of the Bills of Quantities, and Form of Tender can be obtained from the City Engineer, The Council House, Bourne Hill, Salisbury.

Tenders in plain sealed envelopes must be delivered to the undersigned not later than NOON on TUESDAY, 1st NOVEMBER, 1960.

GEO. RICHARDSON,
Town Clerk.

SUNDERLAND
COUNTY BOROUGH.

TENDERS are invited for MAJOR EXTENSIONS TO THE SUNDERLAND TRAINING COLLEGE, the work comprising a 4-STOREY HOSTEL BLOCK, a 2-STOREY TEACHING BLOCK and a SINGLE - STOREY COMMUNAL BLOCK together with ALTERATIONS to the existing premises.

Bills of Quantities and Form of Tender obtainable from Borough Architect, Grange House, Stockton-road, Sunderland, on payment of £2 2s. deposit refundable on receipt of a bona fide tender. Cheques payable to "Sunderland Corporation."

Sealed tenders endorsed "Tender for Major Extensions—Sunderland Training College" must be received at my office, Town Hall, not later than 28th OCTOBER, 1960.

G. S. McINTIRE,
Town Clerk.

BASILDON
URBAN DISTRICT COUNCIL.

ERECTION OF GREENHOUSE, BOILER HOUSE, ETC., AT SELWORTHY NURSERY, KENNEL-LANE, BILLERICAY.

TENDERS shortly will be invited for the ERECTION OF A GREENHOUSE, BOILER HOUSE, POTTING SHED AND MESS ROOM at the above. Experienced builders and contractors wishing to tender should apply for documents to the Council's Engineer and Surveyor, Council Offices, 88 Town Square, Basildon, Essex, not later than the 5th OCTOBER, 1960, and send deposit of £2 2s., which will be refunded upon the receipt of a bona fide tender not subsequently withdrawn and the return of all documents.

BUCKS
COUNTY COUNCIL.

Applications are invited from Contractors wishing to TENDER for the following project:

HIGH WYCOMBE.
HATTER'S-LANE SCHOOL.
TWO CARETAKER'S HOUSES.

Bills of Quantities and Form of Tender will be available on 10th OCTOBER, 1960, and are to be returned by 10 a.m. on MONDAY, 31st OCTOBER, 1960.

Applications for tender documents are to be made as soon as possible to the County Architect, County Offices, Aylesbury, enclosing a deposit of £3 3s., which will be returned on receipt of a bona fide tender not subsequently withdrawn, or in such other circumstances as the Council may approve.

The Council do not bind themselves to accept the lowest or any tender.

AYLESBURY
BOROUGH.

ERECTION OF PUBLIC CONVENIENCES, CAMBRIDGE-STREET, AND ALTERATIONS TO EXISTING PUBLIC CONVENIENCES, CATTLE MARKET, AYLESBURY.
FIXED PRICE TENDERS.

TENDERS are invited for the CONSTRUCTION OF A LADIES' AND GENTS' PUBLIC CONVENIENCE, of a floor area of approximately 650 ft. super, and ALTERATIONS to an existing Gents' Convenience to provide accommodation for both Ladies and Gents.

Bills of Quantities, specifications and form of tender may be obtained from the Borough Engineer and Surveyor, "Friarscroft," 3 Oxford-road, Aylesbury, on payment of a deposit of £2 2s., returnable on receipt of a bona fide tender.

Plans may be inspected during usual office hours at the Borough Engineer and Surveyor's office.

Tenders, in a plain sealed envelope, must be delivered to the undersigned, not later than 12 noon on TUESDAY, 25th OCTOBER, 1960.

The Council do not bind themselves to accept the lowest or any tender.

R. D. W. MAXWELL,
Town Clerk.

Town Hall,
Aylesbury,
Bucks.
26th September, 1960.

YORK CITY.

TENDERS are invited for the ERECTION of:—

(a) A YOUTH CENTRE at Wains-road, Moor-lane Estate, Dringhouses, York.

(b) 62 DWELLINGS at Windsor Garth, Acomb, York.

Bills of Quantities and Forms of Tender may be obtained from the undersigned on payment of a deposit of £3 for either or both (cheques to be made payable to York Corporation).

Drawings may be inspected at the address shown below to where completed Forms of Tender are to be delivered not later than FIRST POST on 28th OCTOBER, 1960.

E. FIRTH, F.R.I.B.A., A.M.T.P.I.,
City Architect.

8 St. Leonard's-place,
York.
September, 1960.

NEWCASTLE
REGIONAL HOSPITAL BOARD.

SOUTH SHIELDS GENERAL HOSPITAL, SOUTH SHIELDS.

The Board proposes to CONNECT TWO WARD BLOCKS at the above hospital by means of a TWO-STOREY CORRIDOR in which will be incorporated a BED-LIFT SHAFT.

Tender documents will be ready for issue to contractors during OCTOBER, 1960, and it is expected that it will be possible for the building operations to commence in MID-NOVEMBER, 1960.

The project has been planned by and will be carried out under the direction of Messrs. George H. Gray and Partners, Chartered Architects, of 52 Camden-street, North Shields.

Contractors wishing to TENDER for this work are asked to submit their names to the Secretary of the Board, Benfield-road, Newcastle upon Tyne, 6, not later than 6th OCTOBER, 1960. A limited number of Contractors may be selected and asked to tender, but the lowest or any Tender will not necessarily be accepted.

HESTON AND ISLEWORTH
BOROUGH.

RE-PLANNING OF KITCHEN, CRANFORD JUNIOR SCHOOL.

TENDERS are invited for ALTERATION WORKS to existing kitchen at the above school. Firms wishing to tender should make application to the Borough Engineer and Surveyor, 88 Lampton-road, Hounslow.

Tender documents will be forwarded on or about 3rd OCTOBER.

Tenders must be sealed in the envelope provided, and received by me not later than 10 a.m. on 24th OCTOBER, 1960.

D. MATHIESON,
Town Clerk.

Town Hall,
Hounslow,
Middlesex.

SAFFRON WALDEN
RURAL DISTRICT COUNCIL.

ERECTION OF FOUR BUNGALOWS AT NEWPORT, ESSEX.

TENDERS are invited for the ERECTION OF FOUR BUNGALOWS at Newport, Essex.

Bills of Quantities and Forms of Tender can be obtained from the Clerk of the Council, Council Offices, Debden-road, Saffron Walden, Essex.

The Council do not bind themselves to accept the lowest or any Tenders.

Tenders, suitably endorsed, must reach the undersigned, not later than SATURDAY, 29th OCTOBER, 1960.

A. W. OVERALL,
Clerk of the Council.

27th September, 1960.

SCUNTHORPE
BOROUGH.

TENDERS FOR THE ERECTION OF ONE 14-STOREY BLOCK OF 79 FLATS ON THE WESTCLIFF ESTATE, SCUNTHORPE.

The Council invite Contractors who have previously undertaken similar contracts and who wish to submit a TENDER for this work to forward their names to the undersigned not later than MONDAY, 10th OCTOBER, 1960.

The Council reserve the right to select from the applicants a list of firms who will be invited to submit tenders and does not bind itself to accept the lowest or any tender.

A deposit of five guineas will be required from those firms selected which will be returned on the receipt of a bona fide tender or return of the Bill of Quantities.

T. M. LISTER,
Town Clerk.

Municipal Offices,
34 High-street,
Scunthorpe.
26th September, 1960.

HAVANT AND WATERLOO
URBAN DISTRICT COUNCIL

invite TENDERS for the ERECTION OF A PUBLIC CONVENIENCE at Southwood-road, Hayling Island.

Conditions of Contract may be inspected at the offices of the Engineer and Surveyor, 1 Park-road North, Havant, from whom Drawings, Specification and Form of Tender may be obtained.

No Tender will be received except in a plain sealed envelope which must bear the word "Tender" followed by the subjects to which it relates, but shall not bear any name or mark indicating the sender.

Tenders must be delivered not later than NOON on MONDAY, 17th OCTOBER, 1960, to the Clerk of the Council, Town Hall, Havant.

The Council do not bind themselves to accept the lowest or any Tender.

HORNCHURCH
URBAN DISTRICT COUNCIL.
EXTERNAL REDECORATION OF COUNCIL HOUSES.
CONTRACT NO. 1—105 HOUSES.
CONTRACT NO. 2—128 HOUSES.

TENDERS are invited for the REDECORATION OF 233 COUNCIL HOUSES in two Contracts. Contractors wishing to submit such Tenders are requested to make application to the Engineer and Surveyor, Council Offices, Billet-lane, Hornchurch, indicating which Contract(s) they wish to price, and forward a deposit of 2 gns. for each set of documents. This deposit will be refunded on receipt of a bona fide Tender or the return of all documents.

Applications should be made before MONDAY, 10th OCTOBER, 1960.

P. L. COX,
Clerk of the Council.

WEST RIDING OF YORKSHIRE
COUNTY COUNCIL.

TENDERS are invited for the ERECTION OF A CLINIC at Dinnington.

Applications to tender must be addressed to the County Architect, Bishopgarth, Westfield-road, Wakefield, and received not later than the 14th OCTOBER, 1960.

The contract will be under the R.I.B.A. Conditions and Form of Agreement.

Sealed Tenders must be addressed to me, the undersigned, and received at Room 5, County Hall, Wakefield, not later than 12 NOON on the 14th NOVEMBER, 1960.

BERNARD KENYON,
Clerk of the County Council.

SUS
PEN
DED CEILINGS

If you want to know about Suspended Ceilings you should know about Paramount Insulating Plasterboard. How to use it . . . what it does . . . what it offers — and the modern refinements such as plastic facing for coloured, brighter ceilings. In fact, there's some interesting literature on the subject. Send for your copy NOW !

THE BRITISH PLASTER BOARD (MANUFACTURING) LIMITED

Ferguson House, 15-17 Marylebone Road, London, N.W.1 Telephone: HUNter 4021

AP221

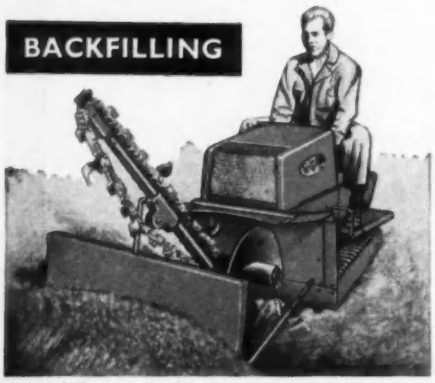
At last! IT'S HERE

The ALLEN 3/12

The trencher You've been waiting for

DIGGING

BACKFILLING



This versatile small trencher and backfiller will dig trenches 3" to 4" wide down to 5′ 6″ deep, or 12″ wide to 2′ 6″ deep, with a range of intermediate width and depth capacities. The digging boom is controlled hydraulically, and can be telescoped to suit the depth of trench. It is powered by a 12½ h.p. 4-stroke engine.

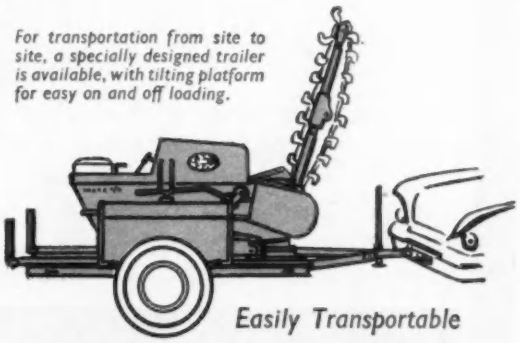
The **ALLEN 3/12** is ideal for builders, plumbers, public works contractors, telephone, water, gas and electrical undertakings, etc., and offers speedy, low-cost, mechanical trenching and backfilling for an almost endless variety of jobs.

The **ALLEN 3/12** is approximately 6′ 4″ long, 3′ 1″ wide, 3′ 1″ high and weighs 1,350 lbs.

Fill in and post the coupon below for full details of this superb machine.

ALLEN

For transportation from site to site, a specially designed trailer is available, with tilting platform for easy on and off loading.



Easily Transportable

To: **JOHN ALLEN & SONS (OXFORD) LTD**
COWLEY, OXFORD, ENGLAND

Please send full details of the ALLEN 3/12 Trencher.

Name .....

Address .....

5 ..... Tel. .....

Space saving insulation with

THERMALITE

Loadbearing insulating building blocks

1 In these single storey homes at Crowthorne in Berkshire, designed and built by Renway Construction Company Limited, 3″ Thermalite Blocks are being used for the loadbearing inner leaf of external cavity walls. They will provide a high degree of *extra* insulation *plus* an overall saving of internal floor space.

Properties of Thermalite.

1. Dry density 50 lb./ft.^{3}
2. Compressive strength to BS:2028 type A.
3. Moisture movement/drying shrinkage to BS:2028 type B.
4. Thermal conductivity (k) 1.4 B.T.U.'s, etc.
5. Nominal face size 18″ x 9″ or 9½″, actual sizes 17¾″ x 8¾″ or 9$\frac{3}{16}$″ x 2½″, 3″, 4″, 5″, 6″ and 8½″ (tolerance to BS:2028).
6. Fire resistance 4″ loadbearing plastered hot face—2 hour grade. Fire resistance 4″ non-loadbearing unplastered—4 hour grade.

2 The photograph shows the neat returns to the reveals, typical of Thermalite construction. No special Corners or Closers are necessary; Thermalite Blocks are readily and accurately sawn. The 3″ thickness of the inner leaf can clearly be seen.

3 Thermalite is particularly suited to dry construction. Direct reliable fixing without need for plugs further reduces the cost of this economic construction method. Note, too, that the cable channelling is spiked directly to the Thermalite wall for speed and simplicity.

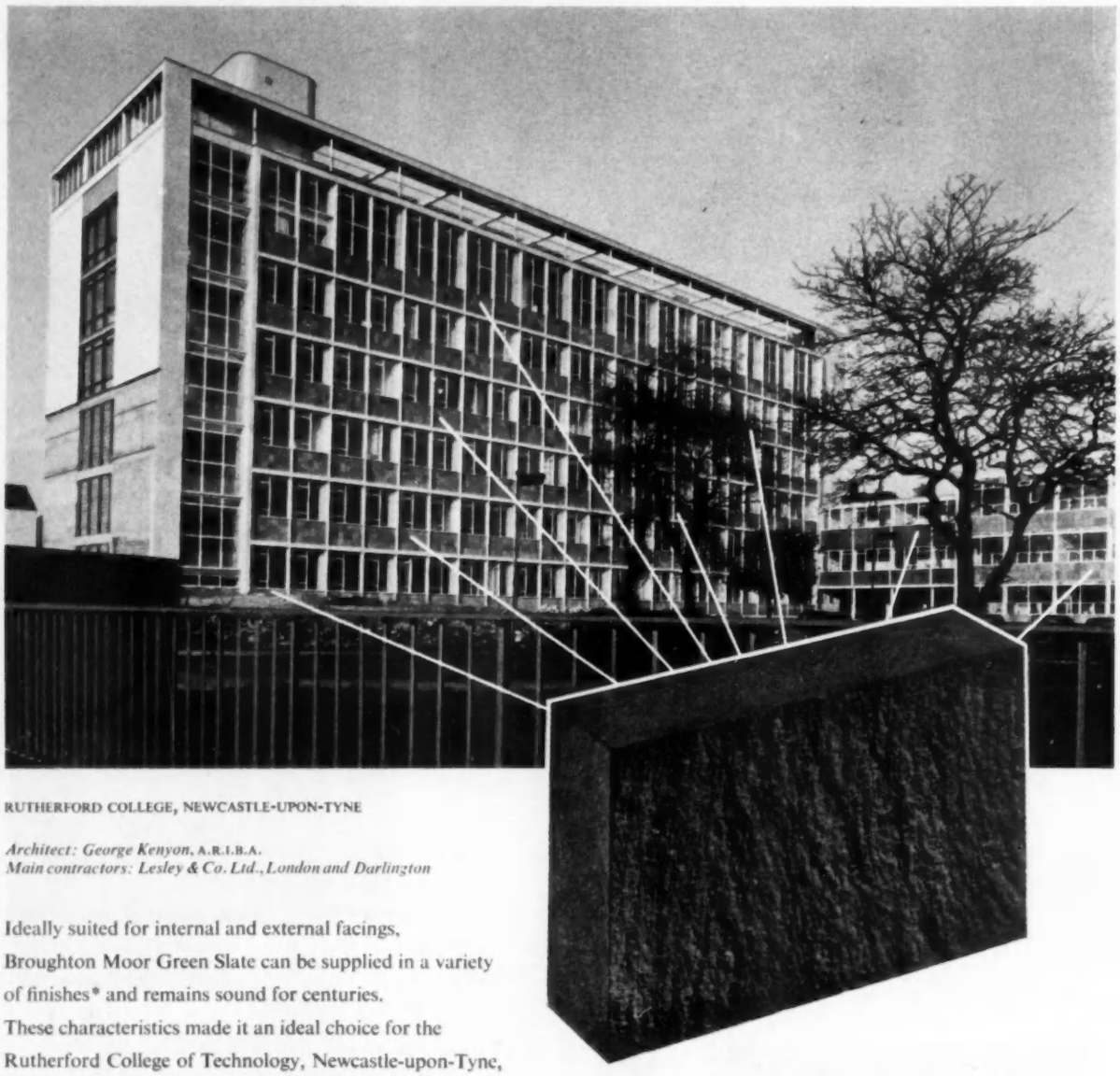
For further information and samples apply to:

THERMALITE YTONG LIMITED

Hams Hall, Lea Marston, Sutton Coldfield, Warwickshire.
Telephone: Coleshill 2081.

A LAING COMPANY

BROUGHTON MOOR OLIVE GREEN SLATE, RIVEN FINISH



RUTHERFORD COLLEGE, NEWCASTLE-UPON-TYNE

Architect: George Kenyon, A.R.I.B.A.
Main contractors: Lesley & Co. Ltd., London and Darlington

Ideally suited for internal and external facings, Broughton Moor Green Slate can be supplied in a variety of finishes* and remains sound for centuries. These characteristics made it an ideal choice for the Rutherford College of Technology, Newcastle-upon-Tyne, architect: George Kenyon, A.R.I.B.A., City Architect. For this contract, Broughton Moor Olive Green naturally riven slate was used, approximately 16,000 square feet being supplied in the form of Ormecraft panels, to which the Broughton Moor Olive Green Slate was cramped and bonded. About 5,000 square feet of the same slate was fixed traditionally.

** An example of Broughton Moor Green Slate showing the naturally riven finish. Finely rubbed, sanded and frame sawn finishes are also supplied and all are available in three distinct colours: Light Sea Green, Olive Green and Pale Green Barred.*
Technical pamphlets showing typical methods of fixing are available as follows:

1. *Flooring*
2. *Facing*
3. *Coping*
4. *Cills*
5. *Riven Face Slabs*

Broughton Moor

GREEN SLATE QUARRIES LTD

CONISTON · THE LAKE DISTRICT LANCASHIRE · TELEPHONE: CONISTON 225-6

FOLKESTONE
BOROUGH.

ONE PAIR HOUSES (Contract No. 1).
ONE PAIR HOUSES (Contract No. 2).
TENNYSON-PLACE.

Contractors wishing to TENDER for either or both of the above are invited to submit their names, together with a deposit of £2 2s. 0d. for each contract, to the Borough Engineer, 2-10 West-terrace, Folkestone, not later than 10th OCTOBER, 1960.

Contractors must state for which of the above contracts they wish to submit a Tender.

N. C. SCRAGG,
Town Clerk.

Town Clerk's Office,
Folkestone.
24th September, 1960.

DURHAM
COUNTY COUNCIL.

TENDERS invited:

High Coniscliffe New County Junior and Infant School—ERECTION.

Frosterley South County School — ADDITIONS AND ALTERATIONS.

Newton Aycliffe Maternity and C.W. Centre, School Clinic and Branch Library—ERECTION.

Applications for further detsils to County Architect, South-street, Durham, not later than 12th OCTOBER, 1960.

J. K. HOPE,
Clerk of the County Council.

Shire Hall,
Durham.

ACTON
BOROUGH.

EDUCATION COMMITTEE.
BROMYARD-AVENUE
PLAYING FIELDS.

TENDERS are invited for EXTENDING A RED SHALE PLAYING AREA AND LAYING OUT TENNIS COURTS.

Forms of Tender may be obtained from the Borough Engineer, Town Hall, Acton, W.3, and must be returned to the Borough Education Officer in sealed envelopes endorsed "Playing Area and Tennis Courts," by FRIDAY, 7th OCTOBER, 1960.

The Council does not bind itself to accept the lowest or any tender and canvassing will discualify.

PUBLIC APPOINTMENTS

ILFORD
BOROUGH.

BOROUGH ENGINEER'S DEPARTMENT.
APPOINTMENT OF ASSISTANT ARCHITECT, Grade A.P.T. IV.

Candidates should preferably have passed the Final Examination of the R.I.B.A. or equivalent, but holders of the Intermediate Examination will be considered.

The commencing salary will be fixed within the scale (£1,065-£1,220 per annum) according to qualifications and experience. London Weighting payable in addition. A five-day working week is in operation.

The candidate appointed will be required for work in connection with design and working drawings for new Baths and Public Library at Fulwell Cross.

The appointment will be subject to one month's notice on either side, to the provisions of the Local Government Superannuation Acts, to the National Conditions of Service and to satisfactory medical examination.

The Council is prepared to consider, if necessary, the provision of housing accommodation.

Application forms obtainable from the Borough Engineer, Town Hall, Ilford, should be returned not later than 17th OCTOBER.

HALSTEAD
RURAL DISTRICT COUNCIL.

APPOINTMENT OF SURVEYOR'S ASSISTANT.

Applications are invited for the above appointment from suitably qualified Candidates who have had general experience in the work of an Engineer and Surveyor's Department, including building inspection and planning administration. In addition to the normal duties of the Department, the successful applicant will be required to act as Clerk of Works, supervising building operations in Council House development.

The salary will be in accordance with Grade A.P.T. I or II, according to qualifications and experience, and a travelling allowance will be payable in accordance with the scale for a 10 h.p. car.

The appointment is subject to the National Scheme of Conditions of Service, the Local Government Superannuation Acts, and termination by one month's notice on either side.

The Council are prepared to consider the provision of housing accommodation for the successful applicant.

Applications, stating age, experience and full particulars, together with the names and addresses of two referees, must be received by the undersigned not later than the 7th OCTOBER, 1960.

H. E. P. STOKES,
Clerk of the Council.

Council Offices,
Mount Hill,
Halstead,
Essex.

LANCASHIRE
COUNTY COUNCIL.

COUNTY ARCHITECT'S DEPARTMENT.

The Land Surveyors and Valuation Branch has vacancies on the permanent staff for ASSISTANTS as follows:—

(a) A.P.T. V, £1,220 to £1,375.

Applicants should be Chartered Surveyors (Valuation), or equivalent, and be experienced in the selection and acquisition of sites and property for all purposes.

(b) Special Class, £785 to £1,075.

Applicants should be Chartered Surveyors (Valuation), or equivalent, particularly competent in the rating and renting of property.

(c) Special Class, £785 to £1,075.

Applicants should be Chartered Surveyors, or equivalent, and be competent and experienced in land surveying.

The work is interesting and varied throughout the large County area.

Commencing salary according to qualifications and experience.

Application Forms obtainable from the County Architect, P.O. Box 26, County Hall, Preston, to be returned by 12th OCTOBER, 1960, quoting Ref. A/B.

30th September, 1960.

SCUNTHORPE
BOROUGH.

(An expanding N. Lincolnshire town of 62,000 population, area 7,895 acres, R.V. £1,562,541.)

ENGINEERING AND ARCHITECTURAL APPOINTMENTS.

Applications are invited for the following appointments in the Borough Engineer and Surveyor's Department:

ENGINEERING.

(1) SENIOR ASSISTANT ENGINEER, A.P.T. IV (£1,065-£1,220 p.a.)

(2) ASSISTANT ENGINEER, A.P.T. II (£765-£880 p.a.).

ARCHITECTURAL.

(3) TWO SENIOR ASSISTANT ARCHITECTS, A.P.T. IV (£1,065-£1,220 p.a.).

(4) TWO ASSISTANT ARCHITECTS, A.P.T. III (£880-£1,065 p.a.).

Applicants for posts (1) and (3) should possess appropriate professional qualifications and for all posts commencing salaries may be fixed within the appropriate salary range.

Housing accommodation available if required, approved removal expenses reimbursed in full, five-day working week. Further information may be obtained on application to the Borough Engineer & Surveyor, Laneham-street, Scunthorpe.

Applications giving age, details of present and past appointments, training, qualifications and experience, together with the names of two persons to whom reference may be made should be sent to the Town Clerk, 34 High-street, Scunthorpe, not later than THURSDAY, 13th OCTOBER, 1960.

T. M. LISTER,
Town Clerk.

Municipal Offices,
34 High-street,
Scunthorpe.
20th September, 1960.

ILFORD
BOROUGH.

BOROUGH ENGINEER'S DEPARTMENT.
APPOINTMENT OF SENIOR ASSISTANT QUANTITY SURVEYOR, GRADE A.P.T. IV.

Applicants must have qualified by examination as Professional Associates of the Royal Institution of Chartered Surveyors (Quantities sub-division) and be competent in taking off with a wide range of experience.

An interesting programme of work is envisaged including a variety of Municipal Buildings and Housing.

The commencing salary will be fixed within the scale (£1,065-£1,220 per annum) according to qualifications and experience. London Weighting is payable in addition. A five-day working week is in operation.

The appointment will be subject to one month's notice on either side, to the provisions of the Local Government Superannuation Acts, to the National Conditions of Service and to satisfactory medical examination.

The council is prepared to consider, if necessary, the provision of housing accommodation.

Application forms obtainable from the Borough Engineer, Town Hall, Ilford, should be returned not later than MONDAY, 10th OCTOBER.

CHURCH COMMISSIONERS

Applications are invited for the following appointments, based in London:

(a) ASSISTANT ARCHITECTS. Candidates must be Members of the R.I.B.A. Commencing salary during 12 months' probation to be £1,250 per annum followed, if satisfactory, by appointment on an established pensionable basis on a scale of £1,325-£1,780 subject to medical examination. These posts cover advisory and executive duties concerning the erection and maintenance of domestic buildings.

(b) ARCHITECTURAL ASSISTANTS for drawing office duties in connection with domestic buildings. Candidates for this post should be at Intermediate R.I.B.A. standard. Salary according to experience within the scale of £820-£1,075.

Apply in writing to the Establishment Officer, Church Commissioners, 1 Millbank, Westminster, S.W.1, not later than 10th OCTOBER, 1960.

LANARK COUNTY COUNCIL

COUNTY ARCHITECT'S DEPARTMENT

The Council have decided that all Architectural Work of an Educational and Public Building Nature will in future be undertaken by the County Architect. Consequently a considerable reorganisation and expansion of the County Architect's Department at Motherwell is envisaged, creating a large number of vacancies for,

ARCHITECTS and **ASSISTANTS**

Salaries ranging from

£1,650 to £605

according to qualifications and experience. The vacancies include a considerable number on salary range £1,450—£1,600 and afford opportunity to qualified Architects to apply their ability and knowledge to progressive design and modern construction techniques.

A Superannuation Scheme is in operation and a 5-day week is under consideration.

Consideration given to applicants' housing requirements.

Applications to County Clerk,
P.O. Box No. 1, Glasgow

HARROW
BOROUGH.

Applications are invited for the following appointments in the Department of the Borough Engineer and Surveyor:—

BUILDING INSPECTOR. Salary £880 per annum, plus London "Weighting" (maximum of A.P.T. Grade II). This post carries an essential user car allowance.

Applicants should be in possession of the Building Inspector's Certificate of the Institution of Municipal Engineers.

TECHNICAL ASSISTANT (BUILDING BYELAWS). Salary £880 per annum, plus London "Weighting" (maximum of A.P.T. Grade II).

Applicants should be qualified Building Inspectors.

The duties will be mainly in the office advising callers regarding the Council's Building Byelaws and other matters normally dealt with in a Building Inspector's Section.

The Council is unable to provide housing accommodation, but a contribution towards removal expenses will be considered.

The appointments will be subject to the Local Government Superannuation Acts; and to the National Joint Council's Scheme of Conditions of Service.

Application forms, obtainable from me, should be returned not later than SATURDAY, 8th OCTOBER, 1960.

D. H. PRITCHARD,
Town Clerk.

Harrow Weald Lodge,
Harrow,
Middlesex.

EAST HAM
COUNTY BOROUGH.

BOROUGH ENGINEER'S DEPARTMENT.

Applications are invited for the following temporary appointments:—

SENIOR ASSISTANT ARCHITECTS, Grade IV, £1,065-£1,220.

London Weighting is paid in addition, and salaries in excess of the minima may be paid according to qualifications and experience. The appointments are for work on a new Technical College and are expected to be for a period of not less than 3 years.

Further details and application forms returnable by 14th OCTOBER, 1960, from the Town Clerk, Town Hall, East Ham, E.6.

SALOP
COUNTY.

ARCHITECT'S DEPARTMENT.

SENIOR ARCHITECT required to act as Deputy Group Leader for new work of an interesting character. Salary Grade A.P.T. V (£1,220-£1,375 p.a.). Applicants must be Associate R.I.B.A. N.J.C. Conditions. Five-day week. A disturbance allowance or weekly separation allowance will be paid to a married man taking up this appointment.

Conditions of service and application forms obtainable from Ralph Crowe, A.A.Dipl., A.R.I.B.A., A.M.T.P.I., County Architect, Column House, London-road, Shrewsbury. Closing date 15th OCTOBER, 1960.

The £.s.d. of OSAL★
—*Hardening New Floor Toppings*

It's not the cost per gallon but the cost per yard that counts

On this basis Tricosal, which hardens a square yard of 3/1 sand and cement screed or granolithic paving 1 in. thick for only 7d., is the most economical as well as the most efficient additive. It hardens integrally and, being a liquid, mixes with the gauging fluid and is evenly distributed throughout the mix.

INTEGRAL CEMENT
TRICOSAL
HARDENER·PROOFER

Tricosal is now available in non-returnable containers.

For 30 years or more Tricosal has been specified by leading Architects not only for hardening but for waterproofing cement and concrete and increasing their resistance to oils and acids. Send for Information Leaflet No. 1.

★ *OSAL is the generic name for the products of A. A. Byrd & Co. Ltd.—" Florosal " for Surface Hardening and protection of Concrete, Stone and Cement—" Neocosal " for Surface Waterproofing of Brick, Concrete and Stone, and " Tricosal ". Literature on each individual product is available from*

A. A. BYRD & CO. LTD. (Dept B3) 210 TERMINAL HOUSE, GROSVENOR GARDENS, LONDON, S.W.1.
Phone: SLOane 5236. Grams: Byrdicom Wesphone, London. Works: Basingstoke, Hants.

ARCHITECTS AND QUANTITY SURVEYORS.

Donald Gibson (Director General) invites you to apply for an appointment in the newly formed WORKS DIRECTORATE of the WAR OFFICE at Chessington, Surrey, where there are vacancies for ARCHITECTS and QUANTITY SURVEYORS.

There is now a unique opportunity to reaccommodate the army and the intention is to focus the best architectural and allied skills on the needs of the modern technical soldier. The work will comprise living accommodation, messes, clubs, offices, technical and educational buildings, hospitals, and everything that is necessary to accommodate the soldier and his family in peacet me. Warlike installations do not form part of the programme.

Whilst most of the design work and preparation of contract documents is done at Chessington, work overseas provides the opportunity for travel, particularly during preliminary and supervisory stages of the work.

Working conditions include 3½ to 5 weeks' leave a year in addition to public holidays.

ARCHITECTS are organised in small self-contained teams, each being fully responsible for design, construction and management of projects. Within the team, responsibility is delegated to job architects, in rotation. Teams study user needs at first hand and are briefed to produce buildings that are both practicable and imaginative. There is no limit to the opportunities presented to progressive architects.

QUANTITY SURVEYORS are similarly organised in small self-contained teams on a fully professional "practice" basis, each team being responsible for estimating, cost planning, preparation of bills of quantities, valuations and settlement of final accounts for all projects assigned to it. Team Leaders have the responsibilities of partners in private practice. There is an approved Training Programme designed to help young surveyors studying for their examinations and a copy of this programme will be sent to you on request.

YOUR FUTURE.—The work of the Directorate embraces all aspects of the architects' and quantity surveyors' profession on a large and varied programme. The aim, whether you are qualified or unqualified, is to provide you with experience that will command a premium in public service or private practice at any time in the future. If you wish to make the public service your career there will be opportunities for pensionable appointments with transfer of existing superannuation where possible.

Salaries:

(i) Senior Grade	£1,840 to £2,120
(ii) Main Grade	£1 325 to £1,780
(iii) Basic Grade	£825 to £1,300
(iv) Technical	£660 to £1,115
(v) Trainee Architects	£615 to £745

Chartered architects and quantity surveyors only will be eligible for posts (i) to (iii). Post (iv) is for quantity surveying assistants only. Post (v) is for trainee architects who have not yet taken their professional practice examination.

Architects should write to Mr. D. E. E. Gibson, C.B.E., F.R.I.B.A., and quantity surveyors to Mr. J. Nisbet, F.R.I.C.S., War Office, Chessington, Surrey, giving full details of your qualifications and experience and stating the grade for which you wish to apply. You may apply at any time.

B22/29/6

NORTHUMBERLAND
COUNTY COUNCIL.

COUNTY ARCHITECT'S DEPARTMENT.

Applications are invited for the following appointment on the permanent staff of this Department:

QUANTITY SURVEYOR.

Salary on A.P.T. Scales Grade IV—£1,065 rising by three annual increments to a maximum of £1,220 per annum (under review). Applicants must be Chartered Quantity Surveyors.

Application forms which can be obtained from the undersigned should be submitted not later than 14th OCTOBER, 1960.

The appointment will be subject to the provisions of the Local Government Superannuation Acts and the successful candidate will be required to pass a medical examination.

C. C. BROWN, A.R.I.B.A.,
County Architect.

30-32 Great North-road,
Newcastle upon Tyne, 2.

HEATING AND VENTILATING ENGINEER.

The National Coal Board invite applications for the post of HEATING AND VENTILATING ENGINEER in their Architects' Branch, Production Department at Llanishen, Cardiff.

Associate Membership of the Institute of Heating and Ventilating Engineers is desirable and applicants should have wide experience in modern engineering services on large public and industrial buildings, with particular emphasis on heating and ventilation systems.

Salary scale: £1,050-£1,600 per annum. Please quote 424/25.

Application Forms, which may be obtained from the Divisional Chief Staff Officer, National Coal Board, Ty Glas-avenue, Llanishen, Cardiff, should be completed and returned within FOURTEEN DAYS of the publication of this advertisement.

SOUTHWICK
URBAN DISTRICT COUNCIL.

QUANTITY SURVEYOR.

Applications are invited for the above appointment at a salary in accordance with the Special Grade (£785-£1,075 per annum) according to qualifications and experience.

Candidates should have passed the Final Examination of the Royal Institution of Chartered Surveyors in the Quantities Sub-Division, and preference will be given to candidates with experience in housing schemes including large blocks of flats.

The appointment is subject to the provisions of the National Scheme of Conditions of Service and to medical examination.

Housing accommodation available if required.

Applications endorsed "Quantity Surveyor" stating age, qualifications and experience, together with the names and addresses of two referees should reach the undersigned not later than MONDAY, 10th OCTOBER, 1960.

A. R. SHOTT,
Clerk of the Council.

WELSH
REGIONAL HOSPITAL BOARD.

Required in Architect's Department, situated near Civic Centre, ASSISTANT QUANTITY SURVEYORS. Salary £905-£1,310.

Applicants must hold the Final Examination of the Royal Institution of Chartered Surveyors and have a good experience in taking off, preparation of Bills of Quantities and estimates, and valuation of works in progress and the settlement of final accounts.

Posts superannuable and five-day week applies. New Entrants to the Health Service will commence at the minimum point of the salary scale. The Board has, however, discretion to fix a starting point at an incremental point above the minimum, where it is considered a candidate has relevant practical experience appropriate to the post to be filled.

Applications to the Secretary, Temple of Peace and Health, Cathays Park, Cardiff, stating age, qualifications, experience, present position, and salary and names of two referees within 10 days.

LEEDS CITY.

CITY ARCHITECT'S DEPARTMENT.
QUANTITY SURVEYING STAFF.
AMENDED ADVERTISEMENT.

A number of vacancies occur in the Quantity Surveying Section which deals with the preparation of bills of quantities and other work in connection with the large building programmes of the department. These programmes include schools, housing with multi-storey flats, hostels and other interesting projects and the posts offer opportunities to work as part of a team in a progressive office.

1. SENIOR ASSISTANT QUANTITY SURVEYOR, Grade B. Salary Scale, £1,320-£1,485.

Applicants should have wide experience in the preparation of bills of quantities for major works including schools.

2. SENIOR ASSISTANT QUANTITY SURVEYOR, Grade A. Salary Scale, £1,310-£1,420.

Applicants should have considerable experience in taking off and preference will be given to those with experience in cost analysis and cost planning.

3. SENIOR ASSISTANT QUANTITY SURVEYORS, Grade A.P.T. V. Salary Scale, £1,220-£1,375.

Applicants should have considerable experience in taking off, in the measurement of work in progress and the settlement of final accounts for major schemes.

4. SENIOR ASSISTANT QUANTITY SURVEYORS, Grade A.P.T. IV. Salary Scale, £1,055-£1,220.

5. SENIOR ASSISTANT QUANTITY SURVEYORS, Grade A.P.T. III. Salary Scale, £880-£1,065.

Applicants for posts Nos. 4 and 5 should be experienced in the measurement of variations and the settlement of final accounts for large schemes and should have some experience of taking off.

6. SENIOR WORKER-UP. Grade A.P.T. III. Salary Scale, £880-£1,065.

It is essential that applicants for this post should have the ability to write a good bill for major schemes and should have wide experience of this type of work in a professional office.

(The salaries quoted are subject to revision.)

Applicants for posts Nos. 1, 2 and 3 should hold appropriate professional qualifications and applicants for posts Nos. 4 and 5 should have reached the appropriate standard of qualification and preference will be given to those qualifying for the Quantities sub-division of the R.I.C.S.

The appointments are superannuable. Medical examination.

ASSISTANCE WILL BE GIVEN IN PROVIDING HOUSING ACCOMMODATION IN APPROVED CASES, IF REQUIRED.

Further details and application forms may be obtained from the undersigned and applications are to be returned by 12 noon on FRIDAY, 21st OCTOBER, 1960.

Canvassing disqualifies.

J. R. SHERIDAN-SHEDDEN,
City Architect.

Priestley House,
Quarry Hill,
Leeds, 9.
21st September, 1960.

SOUTHGATE
BOROUGH.

BOROUGH ENGINEER AND SURVEYOR'S DEPARTMENT.
ASSISTANT ARCHITECTS.
ARCHITECTURAL ASSISTANTS.

Applications are invited for the following appointments in the Department of the Borough Engineer and Surveyor:

(a) A.P.T. Special Grade, £785-£1,070 plus London Weighting.

(b) A.P.T. Grade II, £765-£880 plus London Weighting.

The posts are permanent and superannuated and the starting salary will be fixed in accordance with qualifications and experience. In the case of appointment (a) applicants should be Associates of the Royal Institute of British Architects.

Forms of application may be obtained from the Borough Engineer and Surveyor and should be returned to the undersigned not later than 12 noon on MONDAY, 17th OCTOBER, 1960.

Canvassing, directly or indirectly, will be a disqualification.

GORDON H. TAYLOR,
Town Clerk.

Town Hall,
Palmers Green,
London, N.13.
September, 1960.

HAMPSHIRE.
FAREHAM U.D.C.

Appointment of ESTATE MAINTENANCE OFFICER in the Architect's Section of the Engineer and Surveyor's Department.

Salary—A.P.T. Grade II (£765 to £880). Commencing point in accordance with age and experience.

Subject to the National Scheme of Conditions of Service.

Housing accommodation if required.

Essential User Car Allowance.

Superannuation. Medical.

Fareham is a growing South Coast town of nearly 60,000 population. The successful applicant will be responsible, with administrative assistance, for prompt and efficient maintenance by direct labour of approximately 2,500 houses and all other Council owned buildings. Further information including details required from applicants, available from Engineer and Surveyor, Westbury Manor, West-street, Fareham.

Closing Date—10th OCTOBER, 1960.

B. W. RANDS,
Clerk to the Council.

"Merton,"
5 Grove-road,
Fareham,
Hampshire.

STEVENAGE
DEVELOPMENT CORPORATION.

ARCHITECTS Required in the office of the Chief Architect and Planner, Leonard G. Vincent, C.B.E., A.R.I.B.A., Dip.T.P., A.M.T.P.I., to work on a large building programme.

Here is an excellent opportunity for architects with imagination to make a contribution to, as well as gain useful experience on a number of interesting and exciting projects which include central area development on the pedestrian principle, public buildings, commercial and industrial schemes. The office is run on the group method, there is no pyramid, and groups have a complete cross section of all type of work.

Staff required:—

(a) ASSISTANT ARCHITECT. Salary Scale A.P.T. IV-V (£1,065-£1,375) per annum. A.R.I.B.A. required.

(b) ASSISTANT ARCHITECTS. Salary scale A.P.T. III (£880-£1,065) per annum. A.R.I.B.A. required.

Candidates who are taking final examinations this year may be appointed in A.P.T. II and transferred to a higher vacancy on qualifying.

Five-day week.

Commencing salary within the above grades will be fixed according to qualifications and experience.

Assistance with housing in appropriate cases.

Local Government Superannuation. Medical examination.

Applications giving full details and names of two referees should be sent to the Chief Administrative Officer, Stevenage Development Corporation, Aston House, near Stevenage, Herts, by FIRST POST on FRIDAY, 14th OCTOBER, 1960.

BIRKENHEAD
COUNTY BOROUGH.

WORKS AND BUILDINGS DEPARTMENT.

PRINCIPAL ASSISTANT ARCHITECTS, £1,065-£1,220 according to experience. Applications are invited from experienced Registered Architects capable of taking charge with the minimum of supervision of a wide variety of Housing, General and Educational Projects. Assistance will be given with housing accommodation or up to 100 per cent. mortgage facilities. The appointments are superannuable and subject to one month's notice on either side.

Application form from the Borough Architect, 3 Conway-street, Birkenhead. Closing date for applications: 8th OCTOBER, 1960. Relationship to Members of Senior Officers of the Council must be disclosed.

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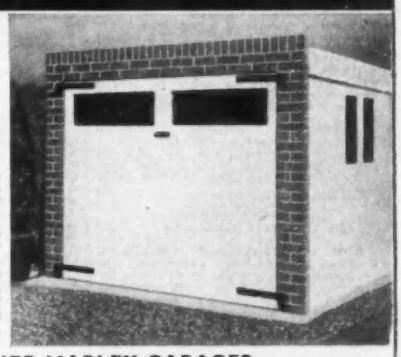

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Width 8′ 6″
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Width 9′ 2″
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Please write to Dept. A8/4
at your NEAREST *Works for illustrated brochures.*

DEPARTMENT OF HEALTH FOR SCOTLAND

QUANTITY SURVEYOR

(MAIN GRADE)

Pensionable post in Edinburgh for man or woman at least 35 on 1.10.60 who has achieved corporate membership of Royal Institution of Chartered Surveyors (Quantities Section) and has had good all round experience. Duties include advising the Department on costs of buildings, materials and methods of construction. Travelling involved. Salary Scale (men): £1285—£1730. Write **Establishment Officer, Department of Health for Scotland (Room 30), St. Andrew's House, Edinburgh, 1,** for application form. Closing date 21st October, 1960.

METROPOLITAN POLICE.

RECEIVER'S OFFICE.

Requires STAFF for interesting and varied work in connection with an extensive Police Building Programme.

Basic Grade ARCHITECTS. Salary: £830 p.a. at age 25 rising by annual increments to £1,300 p.a. (Maximum salary on entry: £1,125 being age 34 point on scale.)

Qualifications required: Applicants must be registered Architects.

LEADING DRAUGHTSMEN/WOMEN (NEW WORKS and SANITARY ENGINEERING). Salary: £980 p.a. at age 21 rising by annual increments to £1,145 p.a.

Qualifications required: Inter-R.I.B.A., Higher National Certificate or equivalent training.

BASIC GRADE DRAUGHTSMEN/WOMEN (NEW WORKS). Salary: £600 p.a. at age 21 rising by annual increments to £980 p.a. (Maximum salary on entry: £895 being age 28 point on scale.)

Qualifications required: Ordinary National Certificate or to be of Inter-R.I.B.A. standard.

TECHNICAL ASSISTANT II (NEW WORKS). Salary: £975 p.a. rising by annual increments to £1,115 p.a.

Qualifications required: Ordinary National Certificate as a minimum qualification or to be of Inter-R.I.B.A./R.I.C.S. (Building) standard.

TECHNICAL ASSISTANTS III (NEW WORKS and MAINTENANCE.) Salary: £20 p.a. at age 26 rising by annual increments to £975 p.a. (Maximum salary on entry £875 p.a. being age 28 point on scale.)

Qualifications required: Ordinary National Certificate as a minimum qualification or to be of Inter-R.I.B.A./R.I.C.S. (Building) standard.

ASSISTANT SUPERINTENDENT OF WORKS III (MAINTENANCE). Salary: £820 p.a. at age 26 rising by annual increments to £975 p.a. (Maximum salary on entry £875 p.a. being age 28 point on scale.)

Qualifications required: Ordinary National Certificate or City & Guilds.

Application forms can be obtained from Chief Clerk, Architect and Surveyor's Department, New Scotland Yard, S.W.1.

WEST HAM
COUNTY BOROUGH.

BONUS MEASURING ASSISTANT Required. Must be experienced in measuring building works in all trades for incentive bonus. Salary: Miscellaneous Grade V, £650 to £715 p.a., plus London Allowance of £25-£40 p.a. according to age.

Commencing salary within the above range according to experience.

Applications in writing, giving full particulars of experience, age, etc., to Borough Engineer & Surveyor, West Ham Town Hall, Stratford, E.15, immediately.

WOKING
URBAN DISTRICT COUNCIL.

ARCHITECTURAL ASSISTANT.
A.P.T. GRADE III-SPECIAL
(£880-£1,070).

Applicants for this appointment in the Architectural Section of the Engineer and Surveyor's Department should be suitably qualified and will be given a salary according to qualifications and experience. The district has rapidly grown to 64,000 and has been granted delegated powers for Health and Education. There is a considerable programme of varied capital works to be undertaken immediately. Assistants are encouraged to control their own contracts from sketch designs to completion.

Facilities for part-time release will be arranged, if the successful applicant has to complete a recognised course of study.

HOUSING ACCOMMODATION if required.

Five-day week. Casual user's car allowance.

Forms of application from Engineer and Surveyor, Council Offices, Woking. Closing date MONDAY, 17th OCTOBER, 1960.

LEEDS CITY.

CITY ARCHITECT'S DEPARTMENT.
AMENDED ADVERTISEMENT.

Applications are invited from persons holding appropriate professional qualifications for the following permanent posts:

(a) ASSISTANT CITY ARCHITECT, (HOUSING).

(b) ASSISTANT CITY ARCHITECT (EDUCATION AND GENERAL).

Salary scale £1,790-£2,085 per annum. Grade "F."

The Assistant City Architect (Housing) will be concerned with large house building programmes and should have had a wide experience of all forms of housing layout, comprehensive developments and multi-storey flats.

The Assistant City Architect (Education and General) will be concerned with major educational building projects and large public buildings, e.g. multi-storey college, municipal office block, abattoir, swimming baths, etc.

Both posts carry great responsibilities and offer worthwhile opportunities to those who are keenly interested in design and the planning and organisation of extensive municipal building schemes.

Applications are also invited for the following permanent posts in (a) Housing, and (b) Education and General sections of the department.

1. PRINCIPAL ARCHITECTS, Grade C. Salary Scale, £1,385-£1,620.
2. ASSISTANT PRINCIPAL ARCHITECTS, Grade B. Salary Scale, £1,320-£1,485.
3. SENIOR ASSISTANT ARCHITECTS, Grade A.P.T. V. Salary Scale, £1,220-£1,375.
4. SENIOR ASSISTANT ARCHITECTS, Grade A.P.T. IV. Salary Scale, £1,065-£1,220.
5. ASSISTANT ARCHITECTS, Grade A.P.T. III. Salary Scale, £880-£1,065.
6. ARCHITECTURAL ASSISTANTS, Grade A.P.T. II. Salary Scale, £765-£880.

(The salaries quoted are subject to revision.)

Applicants for the senior posts must hold appropriate professional qualifications and should have had a wide experience in either housing, education, or other types of large public building work and will be required to design and work on these projects to completion. Applicants will be considered on their capability for design, experience, contemporary outlook and suitability.

The appointments are superannuable. Medical examination.

ASSISTANCE WILL BE GIVEN IN PROVIDING HOUSING ACCOMMODATION IN APPROVED CASES, IF REQUIRED.

Further details and application forms obtainable from the undersigned, are to be returned by 12 noon on FRIDAY, 21st OCTOBER, 1960.

Canvassing disqualifies.

J. R. SHERIDAN-SHEDDEN,
City Architect.

Priestley House,
Quarry Hill,
Leeds, 9.
21st September, 1960.

BIRKENHEAD
COUNTY COUNCIL.

BOROUGH ARCHITECT'S DEPARTMENT.
PRINCIPAL ASSISTANT ARCHITECTS.

£1,065 to £1,220 according to experience.

Applications are invited from experienced Registered ARCHITECTS capable of taking charge with the minimum of supervision of a wide variety of Housing, General Education and Public Buildings. Assistance will be given with housing accommodation or up to 100 per cent. mortgage facilities. The appointments are superannuable and subject to one month's notice on either side. Application form from the Borough Architects, Conway-street, Birkenhead. Closing date for applications: 8th OCTOBER, 1960. Relationship to members or senior officers of the Council must be disclosed.

CHELTENHAM
BOROUGH.

APPOINTMENT OF TWO ARCHITECTURAL ASSISTANTS.

Applications are invited for the appointment of TWO ARCHITECTURAL ASSISTANTS on the Capital Works Establishment of the Borough Engineer's Department, in Special Grade (£785-£1,070 p.a.).

Applicants must be Associate Members of the R.I.B.A. or equivalent, and experienced in the design of Public Buildings, Housing and Ancillary Buildings in connection with Estate Development.

The appointments are subject to the National Joint Council's Conditions of Service; to one month's notice in writing on either side; to the successful applicants passing a medical examination and contributing to the Superannuation Fund.

The Council will provide housing accommodation, if required, for the successful applicants.

Applications, stating age, training, qualifications and experience; present and previous appointments; and giving the names of two referees, are to reach Mr. W. E. C. Bird, A.M.I.C.E., M.I.Mun.E., Borough Engineer, P.O. Box No. 12, Municipal Offices, Cheltenham, not later than SATURDAY, 15th OCTOBER, 1960.

F. D. LITTLEWOOD,
Town Clerk.

Municipal Offices,
Cheltenham.

SOLIHULL
BOROUGH.

APPOINTMENT OF BUILDING INSPECTORS.

Applications are invited for two appointments as BUILDING INSPECTORS in the Borough Surveyor's Department at a salary in accordance with Miscellaneous Grade VIII (£820 x £25 (2) x £870 per annum). This local salary grade will be reviewed following any variation in the National Salary Scales.

Applicants for the posts should hold the Building Inspectors' Certificate of the Institution of Municipal Engineers, or other appropriate qualifications and must have experience in the application of Building Bye-Laws, etc.

The Borough is developing rapidly and the successful applicants will have good opportunities of gaining wide and varied experience.

The appointments will be subject to the provisions of the Local Government Superannuation Acts and to the usual conditions of service.

Housing accommodation will be made available as soon as possible and half removal expenses paid. A travelling allowance in accordance with the essential user scale for a car not exceeding 10 h.p. will also be payable.

Applications giving full particulars of experience, qualifications and past and present appointments, together with the names of two referees should be submitted to the Borough Surveyor, 90 Station-road, Solihull, not later than MONDAY, 10th OCTOBER, 1960.

W. MAURICE MELL,
Town Clerk.

The Council House,
Solihull.
20th September, 1960.

QUANTITY SURVEYING ASSISTANT.

Required by the West Midlands Divisional Coal Board at their Headquarters, Himley Hall, Nr. Dudley, Worcs.

Applicants should be capable of abstracting and billing and "taking off" under supervision with a good experience in a Quantity Surveyor's or Contractor's Office.

Salary will be up to a maximum of £850; exceptionally £1,000 per annum, dependant on ability and experience.

The post is superannuable.

Applications, stating age, qualifications, experience, present and previous appointments and the names and addresses of two referees, to be sent to the Divisional Chief Staff Officer (Ref. T.B.), National Coal Board, Himley Hall, Dudley, Worcs, by 14th OCTOBER, 1960.

RE-ADVERTISEMENT

NOTTINGHAM CITY.

EDUCATION COMMITTEE.
COLLEGE OF ARTS AND CRAFTS.
Principal: Robert Lyon, D.A.(Glas.), F.R.S.A.

Head of School of Architecture: D. W. Notley, B.Arch.(Hons.), L'pool, A.R.I.B.A.

Applications are invited for the posts of two STUDIO MASTERS in the School of Architecture of this College. Duties to commence as soon as possible. Candidates should be Architects holding the degree or diploma of a recognised School, and should have had a minimum of three years' practical architectural experience after registration.

Salary to be in accordance with the Burnham Technical Scale for Grade B assistants, i.e. £700 x £27 10s.—£1,150 for men, and £630 x £22—£920 (with equal pay increments) for women, plus allowances for training, graduation, and professional experience.

Application forms and further particulars from the Principal, College of Art and Crafts, Waverley-street, Nottingham, to whom the forms should be returned WITHIN 10 DAYS of the publication of this advertisement.

All previous applications will be considered in respect of this advertisement.

W. G. JACKSON,
Director of Education.

Education Office,
Exchange Buildings,
Smithy-row,
Nottingham.

LOUGHBOROUGH
BOROUGH.

QUANTITY SURVEYOR.

Applications are invited for the above permanent appointment in the Borough Surveyor's Department to assist in measuring up and examining builders' final accounts for housing contracts. Experience in Taking-Off and billing will also be an advantage.

Applicants should have a good knowledge of quantities and costings, and have either held a similar appointment or had previous experience in a builder's office.

The salary will be in accordance with Grade A.P.T. II of the National Scale of Salaries.

Applications, stating age, present position, salary and experience, together with the names and addresses of two referees, should reach the undersigned not later than FIRST POST ON TUESDAY, 18th OCTOBER, 1960.

The appointment will be subject to superannuation and to a medical examination.

Housing accommodation will be made available if required.

ARTHUR USHER,
Town Clerk.

"Southfields,"
Loughborough.
22nd September, 1960.

WATFORD
BOROUGH.

Applications are invited for the following appointments:

(a) ASSISTANT ARCHITECT. Salary within Grade A.P.T. IV (£1,065-£1,220 per annum).

(b) ARCHITECTURAL ASSISTANTS. Salaries within Grades A.P.T. II-III (£765-£1,065 per annum).

(c) ARCHITECTURAL ASSISTANT. Salary within Grades A.P.T. I-II (£610-£880 per annum).

The Assistant appointed to post (a) will be a Section Leader and will carry a considerable amount of responsibility.

Commencing salaries will be commensurate with experience and ability and housing accommodation will be provided if required.

Applications to be sent to the undersigned not later than 6th OCTOBER, 1960.

F. C. SAGE,
Borough Engineer, Surveyor and Architect.

Town Hall,
Watford,
Herts.

HAMPSTEAD
METROPOLITAN BOROUGH.

Require in the Housing Architect's Department:—

(1) Two ARCHITECTURAL ASSISTANTS (temporary) on A.P.T. Grades I/II (£610-£880 p.a. plus London weighting) for Intermediate R.I.B.A. or Special Scale (£785-£1,070 plus London weighting) for Final R.I.B.A.

(2) JUNIOR ARCHITECTURAL ASSISTANT (temporary), General Division (£210-£730 p.a. plus London weighting.)

Commencing salaries according to qualifications and experience.

Successful candidates will work on area redevelopment and the design and construction of new flats and houses.

Applications, giving training, experience, previous appointments and the names of two referees, to the Town Clerk (B), Town Hall, Haverstock Hill, N.W.3, by 12th OCTOBER, 1960. No housing provided.

LONDON
CORPORATION.

Applications are invited for the following temporary appointment in the City Engineer's Department:—

ASSISTANT SITE ARCHITECT. Salary £1,325 per annum.

This appointment is in connection with the construction under contract of a large Municipal Building and will be for the duration of the works estimated at 2½ years.

Candidates should be Corporate Members of the R.I.B.A. and have had a good general experience in preparation of working detail and site supervision.

This appointment is subject to the Standing Orders of the Corporation and the passing of a medical examination.

Applications, stating age, appointments held and experience, together with the names of two referees, to be forwarded to the City Engineer, Guildhall, London, E.C.2, by the 10th OCTOBER, 1960.

AIR MINISTRY

Require JUNIOR WORKERS-UP in Quantities Division in London. Must be fully experienced and competent to Work-Up entire Bills of Quantities. Candidates must hold O.N.C. or C. & G. (Quantities) or equivalent technical qualifications. Financial assistance and time off given for recognised courses of study. Promotion and pension prospects. Five-day week with 18 days' paid leave a year initially.

Salary ranges from £820 (at age 26) to £975. Applicants, who must be natural born British subjects, should write, stating age, qualifications and experience, to the Manager (PE.1234), Ministry of Labour, Professional and Executive Register, Atlantic House, Farringdon-street, London, E.C.4. No original testimonials should be sent.

NOTTINGHAMSHIRE
COUNTY COUNCIL.

COUNTY ARCHITECT'S DEPARTMENT.
APPOINTMENT OF GROUP ARCHITECT (MINOR WORKS).

Applications are invited for the post of GROUP ARCHITECT (MINOR WORKS) on the salary scale J.N.C. "C," the range of which is £1,385 rising by three increments of £60 and one of £55 to a maximum of £1,620 per annum.

The post involves responsibility for the control of the Minor Works Group in the Office, which handles an annual programme in the order of £300,000, covering projects for all Committees. Individual jobs within the programme range up to a value of £20,000.

The post calls for a high degree of organising ability and initiative, and the person appointed will be expected to maintain a close liaison with senior officials of Client Departments.

Applicants must be qualified Architects who have preferably had good experience in the handling of a large volume of work of this character.

Forms of application may be obtained from the County Architect, County Hall, West Bridgford, Nottingham, to whom they should be returned as soon as possible.

A. R. DAVIS,
Clerk of the County Council.

LEICESTER CITY.

CITY ARCHITECT'S DEPARTMENT.

Applications are invited for the following appointments within the salary of Grade A.P.T. IV (£1,065-£1,220):

(a) GROUP LEADER—EDUCATION.
(b) GROUP LEADER—GENERAL.

The post in the Education Section will interest architects concerned in modular co-ordination and prefabricated systems of building.

Current projects of the General Section include an Area Fire Station, new Municipal Swimming Baths and Homes for Aged Persons.

Previous local government experience not essential. Housing accommodation at an economic rent will be provided if necessary.

National Conditions of Service apply.

Applications stating post applied for together with the names of two referees should reach the undersigned not later than WEDNESDAY, 12th OCTOBER, 1960.

J. H. LLOYD OWEN,
City Architect.

10 Loseby-lane,
Leicester.

BURTON UPON TRENT
COUNTY BOROUGH.

EDUCATION COMMITTEE.
TECHNICAL HIGH SCHOOL
(Roll: 809 mixed).
Head Master: J. A. Leach, B.Sc.

Required in January, 1961, a qualified MASTER to teach WOODWORK up to the Ordinary Level of the General Certificate of Education. Ability to assist with the teaching of Technical Drawing would be an advantage.

Salary will be in accordance with the Burnham Scale. Application should be made by letter to the Head Master, Technical High School, Burton upon Trent, giving details of qualifications and experience, and enclosing two testimonials and the names of two referees.

A. H. BLAKE,
Director of Education.

Education Office,
Guild-street,
Burton upon Trent.

SALFORD CITY
EDUCATION COMMITTEE.

APPOINTMENT OF CLERK OF WORKS.

Applications are invited for appointment as CLERK OF WORKS to supervise the erection of the second phase now proceeding of Clarendon Secondary Modern School.

The appointment will be temporary for approximately 12 months and subject to one month's notice on either side. Salary £16 10s. per week.

Applicants must have a thorough knowledge of all trades.

Applications, stating age, qualifications, previous experience, and when able to commence duties, together with copies of recent testimonials should be addressed to the Director of Education, Education Office, Chapel-street, Salford, 3, not later than 3rd OCTOBER, 1960.

R. RIBBLESDALE THORNTON,
Town Clerk.

PEMBROKESHIRE
COUNTY COUNCIL.

CLERK OF WORKS.

Applications are invited for the above-mentioned appointment in the County Architect's Department at a salary in accordance with Grade I A.P. & T. Division (£645 per annum rising by five increments to £815).

Applicants must have a thorough practical knowledge of all branches of the building trade and be competent to supervise all types of building works.

Appointment subject to medical examination, superannuable, subject to the National Scheme of Conditions of Service for Local Government Officers and terminable by one month's notice.

Forms of application may be obtained from the County Architect, County Offices, Haverfordwest, to whom they should be returned not later than 15th OCTOBER, 1960.

H. LOUIS UNDERWOOD,
Clerk of the County Council.

CENTRAL ELECTRICITY
GENERATING BOARD.
MIDLANDS DIVISION.

Applications are invited for the superannuable appointment of THIRD ASSISTANT ENGINEER (BUILDING) in the Building Section of the Divisional Administrative Department, dealing with the maintenance of buildings at offices and power stations, and building work of a general nature. The duties of the post involve supervision and control of labour, ability to take off quantities and produce estimates. A thorough knowledge of building maintenance and all branches of the building trade is essential.

Candidates should preferably hold an appropriate technical qualification and have had building maintenance experience. Salary will be in accordance with the National Joint Board Agreement, Schedule B, Grade 8, £1,105-£1,410 per annum.

Applications should be addressed to the Establishments Officer, Central Electricity Generating Board, Midlands Division, 53 Wake Green-road, Moseley, Birmingham 13, quoting vacancy number 261/60MD to reach him by 7th OCTOBER, 1960.

METROPOLITAN WATER BOARD.

ARCHITECTURAL STAFF.

Applications are invited for the following appointments in the Surveyor's department:—

(a) ASSISTANT ARCHITECTS.
Salary scale £1,180-£1,300 per annum.
(b) TECHNICAL ASSISTANT.
Salary scale £730 (at age 21)-£1,110 per annum.

Commencing salaries within the above scales according to age and experience.

Applicants for posts (a) must be corporate members of the Royal Institute of British Architects and should have had experience in the design, preparation of plans and working drawings and specifications for the erection of houses and offices. The provision of housing accommodation would be considered.

Applicants for post (b) must have passed the intermediate examination of the Royal Institute of British Architects.

These are permanent pensionable posts offering interesting work with good conditions of service.

Forms of application from the undersigned (quoting ref. B and position applied for) to be returned by 24th OCTOBER, 1960.

S. D. ASKEW,
Clerk of the Board.

New River Head,
Rosebery-avenue, E.C.1.

ELSTREE
RURAL DISTRICT COUNCIL.

TECHNICAL ASSISTANT,
Grades A.P.T. I-II.

Applications are invited for the above appointment in Engineer and Surveyor's Department for work in connection with housing and other building schemes. Salary within Grades A.P.T. I-II, £645-£960 per annum plus appropriate London Weighting.

Applicants should hold, or be studying for, one of the recognised Quantity Surveying qualifications and must have a sound knowledge of building construction and Contract procedure, also experience with either Local Authorities or Contractors in drawing up Specifications, preparing Bills of Quantities, measuring work in progress and dealing with accounts.

The appointment will be subject to the National Scheme of Conditions of Service, the provisions of the Local Government Superannuation Acts, 1937-1953, and will be determinable by one month's notice, in writing, on either side. The successful candidate will be required to pass a medical examination.

Applications, together with a copy of one testimonial and the name and address of one referee, should be sent in envelopes endorsed "Technical Assistant" to the Engineer and Surveyor to arrive on or before MONDAY, 24th OCTOBER, 1960.

Relationship to any Member or Officer of the Council must be disclosed and canvassing directly or indirectly will disqualify.

A. LANCASHIRE,
Clerk of the Council.

Council Offices,
Shenley-road,
Boreham Wood,
Herts.
27th September, 1960.

BEBINGTON
BOROUGH.

SENIOR ASSISTANT ARCHITECT,
GRADE A.P.T. V.

Applications are invited for the above post, commencing salary of which will be fixed according to qualifications and experience.

A five-day week is in operation.

Applicants must hold appropriate architectural qualification and should also be capable of undertaking development schemes of housing and public buildings. The person appointed will be expected to take a large measure of responsibility for schemes of considerable importance.

Application forms are available from the Borough Engineer and Surveyor, Town Hall, Bebington, Cheshire, and when completed should be returned to the Town Clerk so as to be received by him, at the same address, not later than first post on 17th OCTOBER, 1960.

The candidate appointed, if married and considered by the Council to be in need of housing at the time of appointment, will be found accommodation within a reasonable period of time.

Canvassing will be a disqualification.

BASILDON
DEVELOPMENT CORPORATION.

DEPARTMENT OF ARCHITECTURE AND PLANNING.
CLERKS OF WORKS.

(i) CLERK OF WORKS required to join carefully selected team, mainly for housing contracts. Salary range £800-£980 per annum. O.N.C., City and Guilds, or M.Inst. Clerks of Works preferred.

(ii) ASSISTANT CLERK OF WORKS, salary £765-£880 per annum required mainly to supervise finishings, and preference will be given to applicants holding City and Guilds certificate in Painting and who have had good supervisory experience in that trade.

Appointments are superannuable and subject to satisfactory medical examination.

Housing available.

Applications immediately to the General Manager giving full details.

CRAWLEY
DEVELOPMENT CORPORATION

have the following vacancies in the Estates Department (Maintenance Section):—

1. ASSISTANT BUILDING SURVEYOR, A.P.T. III-IV, £880-£1,220. Sound experience in estimating for and carrying through large scale repairs and alterations essential. Must be capable of working on own initiative. Must have passed final examination of R.I.C.S. (Building Sub-Division) or other approved professional institution.

2. ASSISTANT IN MAINTENANCE SECTION, A.P.T. I-II, £610-£880. Similar requirements to the last appointment but Intermediate Examination of R.I.C.S. (Building Sub-Division) or other approved professional institution acceptable.

Commencing salary in each case according to age and experience. Housing provided in approved cases. Contributory Superannuation Scheme.

Apply on forms from Chief Estate's Officer (Vacancy), Broadfield, Crawley, Sussex, by 17th OCTOBER, 1960.

WORCESTER CITY.

APPOINTMENT OF CHIEF ASSISTANT ARCHITECT.

Applications are invited for this post within A.P.T. Grade V (salary £1,310-£1,480). Candidates must hold the A.R.I.B.A. qualification and have had considerable experience in housing and other general municipal works.

A house will be made available to the successful candidate, and an essential users' car allowance is applicable to the post.

The appointment is superannuable and conditional upon the passing of a medical examination.

Applications, together with the names of two referees, stating age, qualifications and experience, are to be sent to the City Engineer and Surveyor, 22 Bridge-street, Worcester, to reach him not later than FRIDAY, the 14th OCTOBER.

BERTRAM WEBSTER,
Town Clerk

Guildhall,
Worcester.

THE EAST MIDLANDS
ELECTRICITY BOARD.

GENERAL ASSISTANT ENGINEER (ENGINEERING DRAUGHTSMAN): LEICESTERSHIRE AND WARWICKSHIRE SUB-AREA. VACANCY NO. 63/60.

Salary: N.J.B. Class "K." Grade 16 (£715-£805 per annum); or Class "K," Grade 15 (£765-£870 per annum) according to qualifications and experience.

The duties will include the preparation of drawings and diagrams relating to substation plant and equipment.

A technical qualification at least equivalent to the Ordinary National Certificate in Electrical Engineering and a knowledge of building construction would be an advantage.

Applications giving details of age, present position and salary, qualifications and experience should be addressed to The Manager, Leicestershire and Warwickshire Sub-Area, Upper Bond-street, Hinckley, WITHIN 14 DAYS of the date of this advertisement.

SURVEYORS
(BASIC GRADE)

Required by Ministry of Works in London, Home Counties, Birmingham and Aberdeen. National salary scale £805 (at age 25) to £1,260 per annum. Starting pay up to £1,095 at age 34, according to age and experience. Salary for London posts is subject to an addition of up to £40 per annum. Five-day week, 22 days' annual leave. Prospects of promotion and opportunities for permanent and pensionable posts.

Applicants should be Registered Architects by examination or Corporate Members of R.I.C.S. (Building Section).

Apply stating age, qualifications and full details of experience to Chief Maintenance Surveyor (Recruitment), Ministry of Works (B), Stanley House, Marsham-street, London, S.W.1.

KESTEVEN
COUNTY COUNCIL.

COUNTY ARCHITECT'S DEPARTMENT.
ASSISTANT ARCHITECTS
Special Grade (£785-£1,070).

Full particulars of the above appointments may be obtained from the County Architect, County Offices, Sleaford, Lincs.

Applications from suitably qualified persons, with the names and addresses of two referees, should reach the undersigned not later than the 17th OCTOBER, 1960.

J. E. BLOW,
Clerk of the County Council.

County Offices,
Sleaford,
Lincs.

LONDON
COUNTY COUNCIL.

BUILDING SURVEYOR to act as district officer for section of parks and open spaces in London. Would appeal to man with liking for the open air and interested in maintenance of facilities for outdoor games (cricket, football, athletics, swimming, etc.) as well as buildings and services. Pension scheme. Up to £1,250. Apply Chief Officer, L.C.C. Parks Department (A1/12510 County Hall, S.E.1. (WATerloo 500, Ext. 8076.)

HIGH WYCOMBE
BOROUGH.

ARCHITECTURAL ASSISTANT.

Applications are invited for the appointment of an ARCHITECTURAL ASSISTANT in the Borough Engineer and Surveyor's Department within the salary scale A.P.T. II (£765-£880 per annum).

Applicants should have good general experience in Local Authority Housing work.

The successful applicant will be required to pass a medical examination.

Suitable housing accommodation will be provided if required.

Applications, together with the names of two referees, must be sent to J. A. Parkinson, M.A., A.M.I.C.E., Borough Engineer and Surveyor, Municipal Offices, High Wycombe, not later than TUESDAY, 18th OCTOBER, 1960.

J. A. PARKINSON,
M.A., A.M.I.C.E.,
Borough Engineer and Surveyor.

COVENTRY CITY.

DEPARTMENT OF ARCHITECTURE AND PLANNING (QUANTITY SURVEYING DIVISION).

(a) QUANTITY SURVEYORS, appropriately qualified, A.P.T. IV/V (£1,140-£1,480).

(b) ASSISTANT QUANTITY SURVEYORS. Intermediate Qualification, A.P.T. II/III (£815-£1,140).

Appointment may be made, according to qualification/experience within combined Grade. Permanent and pensionable subject to satisfactory medical certificate.

Housing accommodation in approved circumstances. Removal expenses loan.

Good general experience desirable. For post (a) ability to both take-off and manage large Contracts required.

Details and application form from City Architect and Planning Officer, Council House, Coventry, returnable by 10th OCTOBER, 1960.

SPALDING
RURAL DISTRICT COUNCIL.

Applications are invited for the post of JUNIOR ASSISTANT in the Architect's Department. Salary within Grades Miscellaneous I-II (£425-£525) according to age and experience. Applicant must have some experience as a draughtsman. The appointment will be subject to a medical examination and the Local Government Superannuation Acts.

Applications, stating age, qualifications and experience, together with names of two persons to whom reference can be made, to reach the Clerk of the Council, Rural Council Offices, Priory-road, Spalding, Lincs., not later than 14th OCTOBER, 1960.

G. S. ASHWORTH,
Clerk of the Council.

TWICKENHAM
BOROUGH.

Applications are invited for the following posts:—

(a) SENIOR ASSISTANT ENGINEER (A.P.T. IV—£1,065-£1,220).
(b) ASSISTANT ARCHITECT (A.P.T. II—£765-£880).
(c) JUNIOR ASSISTANT ENGINEER (A.P.T. I—£610-£765).
(d) PLANNING ASSISTANT (A.P.T. III—£880-£1,065).

Posts (a) must have passed the final; (b) and (c) the intermediate examinations of the appropriate technical institute, and (d) commencing salary in accordance with qualifications and experience. All plus London Weighting Allowance.

Application forms obtainable from Borough Engineer, Municipal Offices, Twickenham, to be returned by 17th OCTOBER, 1960.

W. H. JONES,
Town Clerk.

DEVON
COUNTY COUNCIL.

Require 2 SENIOR ARCHITECTS on A.P.T. V (£1,220-£1,375), 5 SENIOR ARCHITECTS on A.P.T. IV (£1,065-£1,220) and 4 SENIOR ARCHITECTS on N.J.C. Special Scale (£785-£1,070).

In approved cases, loans for house purchase and removal expenses are available—also lodging allowance for married officers while seeking accommodation.

Particulars and Application Form, returnable by 21st OCTOBER, 1960, from County Architect, 97 Heavitree-road, Exeter.

WOOLWICH
METROPOLITAN BOROUGH.

CHIEF ASSISTANT ARCHITECT.

Applications are invited for the above permanent appointment in Grade C of the lettered scales commencing at £1,445 per annum rising to £1,620 per annum. A car allowance is payable.

Candidates must have passed the final examination of the R.I.B.A. and have had extensive architectural experience (especially housing), the organisation of the work and the supervision of staff.

The person appointed will be responsible to the Chief Architect for the control of a staff of 20.

Full particulars and application forms may be obtained from the Borough Engineer, Town Hall, Woolwich, S.E.18, and applications are to be received by the Town Clerk not later than 10th OCTOBER, 1960.

BOLTON
COUNTY BOROUGH.

BUILDING WORKS DEPARTMENT.
Applications invited for appointment of MATERIALS OFFICER. Salary (£715-£775) Miscellaneous Grade VI. Applicants should be experienced in purchasing all types of building materials, in receipt and issues of stores, and keeping stores records.
The post is superannuable subject to medical examination. Applications, stating age, qualifications, details of experience and naming two referees, to be received by me by 7th OCTOBER, 1960.
PHILIP S. RENNISON,
Town Clerk.
Town Hall,
Bolton.

WORCESTER CITY.

APPOINTMENT OF QUANTITY SURVEYOR'S ASSISTANT.
Applications are invited for this APPOINTMENT within A.P.T. Grade I (£645-£815). Applicants must have a good knowledge of quantity surveying duties and be experienced in working up, site measurement and checking labour and material cost variations.
The appointment will be subject to a medical examination.
Housing accommodation will be available if required.
Applications stating age and experience, together with the names of two referees, should be sent to the City Engineer and Surveyor, 22 Bridge-street, Worcester, by 14th OCTOBER.
BERTRAM WEBSTER,
Town Clerk.
Guildhall,
Worcester.

OLDBURY
BOROUGH.

BOROUGH ENGINEER AND SURVEYOR'S DEPARTMENT.
Applications are invited for the following appointment on the staff of the Borough Surveyor's Department :—
(a) ARCHITECTURAL ASSISTANT, salary A.P.T. II (£765-£880).
Candidates should be well trained and experienced in the design and preparation of schemes and supervising contracts in connection with general housing including multi-storey flats, public buildings, school buildings, and minor improvements and maintenance works.
The appointment will be superannuable subject to the National Conditions of Service and to the selected candidate passing a medical examination.
Applications giving particulars of age, qualifications, experience, and the names of two referees, should be delivered to the undersigned not later than the 7th OCTOBER, 1960.
KENNETH PEARCE,
Town Clerk.
Municipal Buildings,
Oldbury.
September, 1960.

WIDNES
BOROUGH.

ARCHITECT'S DEPARTMENT.
QUANTITY SURVEYING ASSISTANT.
Applications are invited for the above post, in Grade A.P.T. II (£765-£880). Candidates must have passed the R.I.C.S. intermediate examination or equivalent. The successful candidate will work under the supervision of the Senior Quantity Surveyor.
Five-day week; housing accommodation to rent or lodging allowance in lieu for married applicants; removal expenses in full; superannuation scheme; medical examination.
Applications, quoting two referees, by 14th OCTOBER, 1960, to Borough Architect, Brendan House, Widnes.
FRANK HOWARTH,
Town Clerk.
Town Hall,
Widnes.
September, 1960.

LONDON
COUNTY COUNCIL.

ARCHITECTURAL ASSISTANTS, for preparation of working drawings and specifications and supervision of contracts for buildings in parks and open spaces.
ASSISTANT LANDSCAPE ARCHITECTS, for preparation of schemes, working drawings and specifications, and supervising contracts. Interesting work on new parks, open spaces and housing estates.
Up to £950 according to qualifications and experience. Apply Chief Officer, L.C.C. Parks Dept. (A1/2511/A), County Hall, S.E.1. (WATerloo 5000. Ext. 8076.)

EAST HAM
COUNTY BOROUGH.

ASSISTANT PLANNING OFFICER.
Grade A.P.T. I, £610-£765.
PRINCIPAL ASSISTANT PLANNING OFFICER,
Grade A.P.T. IV, £1,065-£1,220.
Vacancies in Borough Engineer's Department. London Weighting paid in addition. Salary above minimum paid according to qualifications and experience.
A subsistence allowance may be paid over a reasonable period to persons appointed if unable to obtain suitable housing accommodation, necessitating the maintenance of two homes.
Details and application form from the Town Clerk, E.6.
Closing date 14th OCTOBER, 1960.

CHELSEA
METROPOLITAN BOROUGH.

BUILDING SURVEYOR, A.P.T. Grade III (£880-£1,065) per annum, plus "weighting" required on staff of the Borough Engineer and Surveyor. Applicants must be capable of carrying out building surveys, preparing estimates, specifications for converting premises and the supervision of these works. Application forms, obtainable from the Borough Engineer and Surveyor, Metropolitan Borough of Chelsea, Town Hall, King's-road, Chelsea, S.W.3, with the names of three referees, should be received not later than MONDAY, 17th OCTOBER, 1960.

HARLOW
DEVELOPMENT CORPORATION.

BUILDING CLERK OF WORKS.
Applications are invited for post of CLERK OF WORKS on the temporary staff, with experience on large scale housing, industrial and commercial work.
Salary within scale £765-£880.
Housing available.
Applications giving full details and names of two referees to General Manager, Terlings, Harlow, Essex, WITHIN 10 DAYS.

KENT
COUNTY COUNCIL.

Require a CHIEF LANDS SURVEYOR, having an R.I.C.S. or equivalent qualification, to take charge of the Survey Section under the County Architect. The volume of work being considerable, the post requires a man of initiative and drive.
Duties include all land surveying, levelling, reporting on sites and properties, attendance at public inquiries, and obtaining Town Planning and similar approvals. Salary within the Combined J.N.C. Grades C-D (£1,385 to £1,755).
Application forms and further details obtainable from the County Architect, Springfield, Maidstone. Closing date 7th OCTOBER, 1960.

DORKING
URBAN DISTRICT COUNCIL.

APPOINTMENT OF BUILDING WORKS FOREMAN.
Applications are invited for the above POSITION in the Engineer and Surveyor's Department of the Council.
Candidates must be not less than 35 years of age, and have received a sound training in the building trade, and have preferably had experience as a general foreman.
Salary Miscellaneous Grade V (£650-£715) particulars and application form from the Engineer and Surveyor, returnable by 14th OCTOBER, 1960.
F. G. SUTHERLAND,
Clerk of the Council.
Pipbrook,
Dorking,
Surrey.
22nd September, 1960.

SALOP
COUNTY ARCHITECT'S DEPARTMENT.

Applications are invited from qualified men experienced in the design of heating and electrical installations for the post of PRINCIPAL ASSISTANT ENGINEER. The man appointed will be required to act as Deputy to a newly appointed Chief Engineer, and knowledge of modern methods is desirable. Salary grade A.P.T. V (£1,220 rising to £1,375 p.a.). N.J.C. Conditions. During the early stages of the appointment a separation or disturbance allowance can be paid to a married man pending the finding of housing accommodation. Conditions of service and application forms obtainable from Ralph Crowe, A.A.Dipl., A.R.I.B.A., A.M.T.P.I., County Architect, Columbia House, London-road, Shrewsbury. Closing date 21st OCTOBER, 1960.

LUTON
BOROUGH.

HEATING ENGINEERING ASSISTANT Required. Salary A.P.T. III (£880-£1,065). Experienced in preparation of drawings and specifications for heating systems and hot and cold water services. Consideration will be given to the provision of housing accommodation and payment of reasonable removal expenses. Application forms from Borough Architect, Town Hall, Luton, returnable by 15th OCTOBER, 1960.

HUNTINGDONSHIRE.

COUNTY ARCHITECT'S DEPARTMENT.
Applications are invited for the following appointments:
(a) ARCHITECTURAL ASSISTANTS, Special Grade (£785-£1,070).
(b) ARCHITECTURAL ASSISTANT, Grade A.P.T. II (£765-£880).
The persons appointed will become members of small architectural teams engaged in projects of varying size. It is desired that the persons appointed shall be keenly interested in architecture with an up-to-date approach to both planning and design.
Application forms and further particulars may be obtained from The County Architect, County Buildings, Huntingdon; completed forms should be returned to the undersigned as soon as possible.
A. C. AYLWARD,
Clerk of the County Council.
County Buildings,
Huntingdon.

WILLESDEN
BOROUGH COUNCIL.

Require a TECHNICAL ASSISTANT, suitably qualified, salary grade A.P.T. II, i.e. £815 p.a., rising to £960 p.a., plus London Weighting up to £40 p.a. according to age.
Candidates should be experienced in the repair, maintenance, adaptation and improvement of housing properties, and be able to prepare detailed specifications of work.
Further details and forms of application from the Housing and Estates Manager, Town Hall, Kilburn, N.W.6, returnable by 15th OCTOBER, 1960.
R. S. FORSTER,
Town Clerk.

LANCASHIRE
COUNTY COUNCIL.

Applications are invited for the following appointments on the permanent staff of the Architect's Department:
HEATING ENGINEERS, £1,065-£1,220 and £880-£1,065.
Applicants should be Corporate Members of the I.H. & V.E. or hold exempting qualifications. Candidates should have a wide experience in designing heating, ventilating and domestic hot water installations and other services for large buildings including schools and colleges.
Forms of application obtainable from and returnable to the County Architect, P.O. Box 26, County Hall, Preston, by 17th OCTOBER, 1960.

EAST HAM
COUNTY BOROUGH.

SENIOR ASSISTANT ARCHITECT, A.P.T. III—SALARY £880-£1,065 PLUS LONDON WEIGHTING.
ARCHITECTURAL ASSISTANTS, A.P.T. I—SALARY UP TO £805 PER ANNUM INCLUDING LONDON WEIGHTING.
Subsistence allowances may be granted over a reasonable period to the persons appointed if unable to obtain suitable housing accommodation, necessitating the maintenance of two homes.
Further details and application forms returnable by 14th OCTOBER, 1960, from the Town Clerk, Town Hall, East Ham, E.6.

OVERSEAS PUBLIC APPOINTMENTS

WEST INDIES.

SUPERVISOR OF BUILDING SERVICES.
Required at the University College of the West Indies on contract for three years with possibility of extension. Considerable experience of construction and maintenance of buildings, roads, services, kitchen and fixed laboratory equipment required. Salary £1,500-£2,000 p.a. dependent on qualifications and experience. F.S.S.U. Unfurnished accommodation at rental not in excess of 10 per cent. of basic salary. Passages for up to five persons on appointment and normal termination. Duties to be assumed as soon as possible.
Applications in triplicate, naming three referees should be received by the Registrar, University College of the West Indies, Mona, Kingston, 7, Jamaica, W.I as soon as possible.

NORTHERN NIGERIA
GOVERNMENT.

Requires EDUCATION OFFICERS (TECHNICAL) on favourable contract terms.

Qualifications:
1. Either Higher National Diploma in Electrical Engineering, or other qualifications of similar standing.
2. Or Higher National Diploma in Building, or other qualifications of similar standing.
3. Or Intermediate examination of the Royal Institution of Chartered Surveyors, and be studying for the Final examination.

In all cases a Technical Teaching Certificate, and teaching experience in a Technical College or a Technical Institute will be an advantage.

Duties:
The candidates will be required for duties at the Technical Institute and may be called upon to serve elsewhere in Northern Nigeria. They will be required to teach in Senior and Junior Departments of the Technical Institute as well as assisting in evening work. The courses in operation are engineering subjects leading to Overseas Ordinary Certificates. All courses are fully residential. The officers appointed will be required to perform any other duties as directed by the Ministry including those Institutional in character as for a Boarding Establishment.

Emoluments:
1. Salary depending on qualifications and experience in the range of £1,152-£2,046 per annum.
2. Children's Allowance of £120 for one child, £216 for two and £288 for three children eligible.
3. Clothing Allowance of £45 on first appointment.
4. Resettlement grant of £37 10s. 0d. for each three months' service inclusive of earned leave payable on satisfactory completion of contract.
5. First-class fares for officer and wife on appointment and on leave, and assistance towards cost of children's passages.

Leave: Generous home leave on full pay.

Applicants should write to:—
The Recruitment Secretary (Overseas), Northern Region Recruiting Agency, Nigeria House, 9 Northumberland-avenue, London, W.C.2; or telephone TRAfalgar 1244, extension 145.

SOUTH AUSTRALIAN
GOVERNMENT.

Applications are invited for appointments in the following professions in the Government Service of South Australia:
ARCHITECTS, £A1,170-£A1,920.
ARCHITECTURAL ASSISTANTS, £A1,340-£A1,525.
QUANTITY SURVEYORS, £A1,460-£A1,655.
ASSISTANT QUANTITY SURVEYORS, £A1,340-£A1,525.
SPECIFICATION WRITERS, £A1,340-£A1,525.
SURVEYORS AND ASSISTANT SURVEYORS, £A1,340-£A1,525.
DRAUGHTSMEN, STRUCTURAL, £A1,340-£A1,525.
DRAUGHTSMEN, ARCHITECTURAL, £A895-£A1,280.
Commencing salaries within these ranges according to qualifications and experience.
First class passages provided for selected applicants and families.
Good leave conditions (Recreation, Sick and Long Service). Superannuation Fund available. Houses on a rental basis provided.
Full information from Agent General for South Australia, 50 Strand, London, W.C.2. WHItehall 7471.

AND NOW THE ALBOROUGH SLIDE OVER

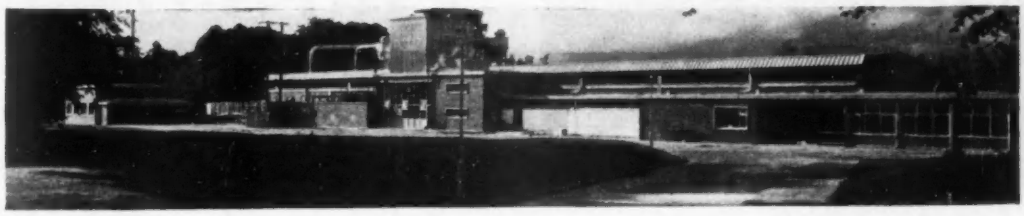
The Alborough Slide-over Door is made of hot-dipped galvanised steel laths, steel-welded and riveted. A pleasing appearance is combined with maximum strength, lightness and durability.

The range of standard sizes will meet most requirements; there are no complications in fixing beyond some slight adjustments of door frames.

Here at last is the perfect Garage door—and it's an Alborough construction! Designed for simple one-hand operation in all weathers, it can be raised and lowered almost at a touch. This manipulation-ease is due to its ball-bearing slide-over action which swings the door up and down without effort.

Alborough

A.B.C.D. (Raynes Park) LTD.
34/35 Alpha Road, Surbiton, Surrey.
Tel: ELMbridge 6591/3



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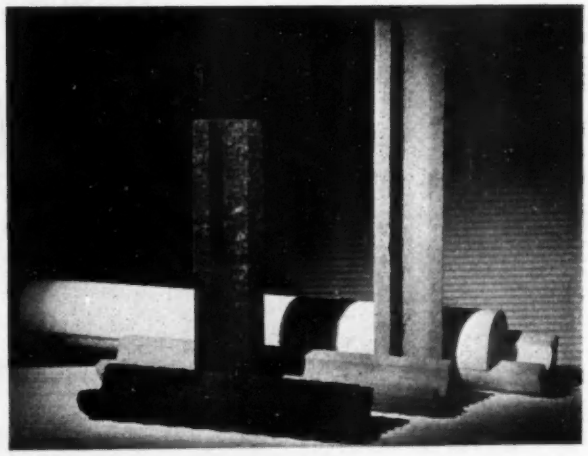

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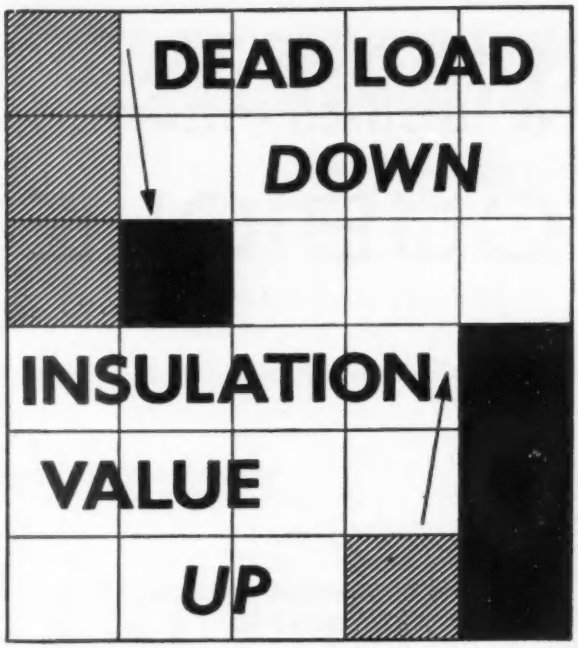

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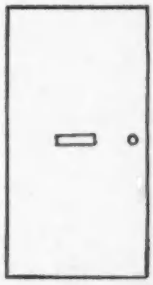

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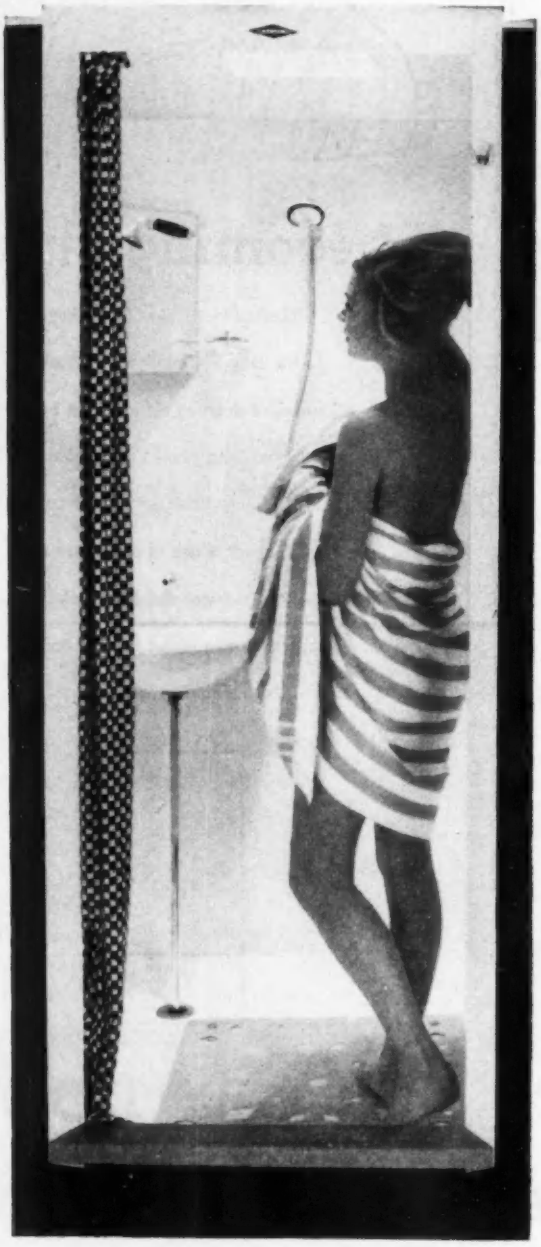

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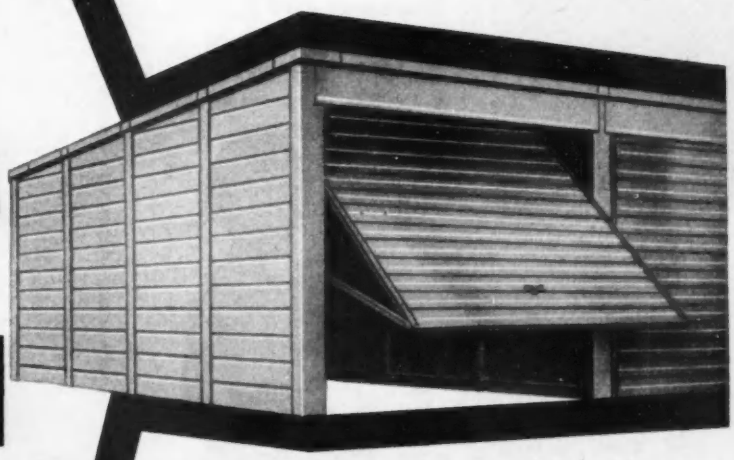

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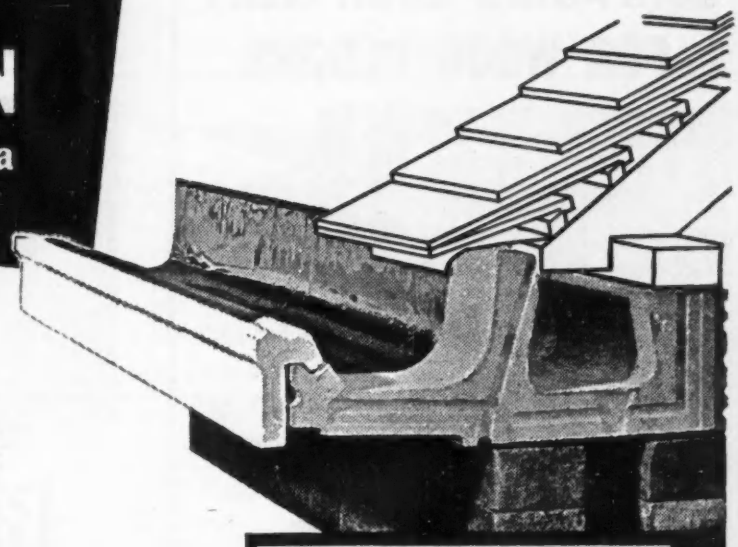

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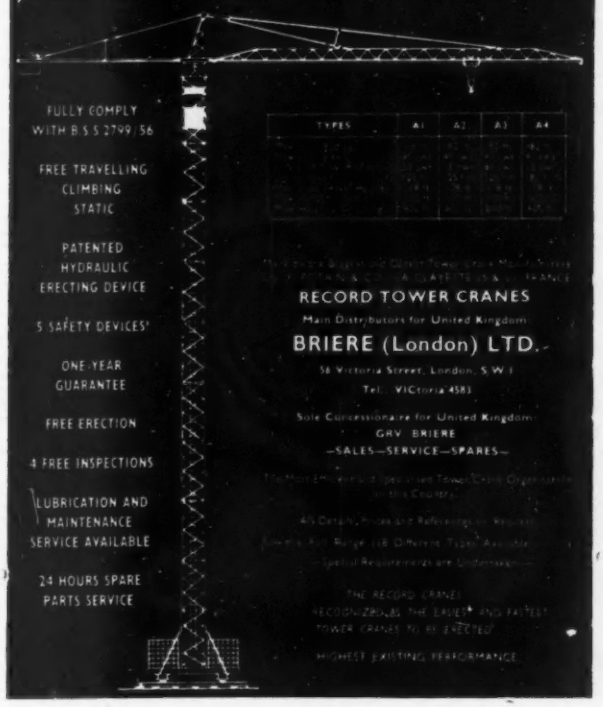

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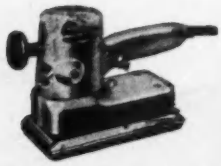

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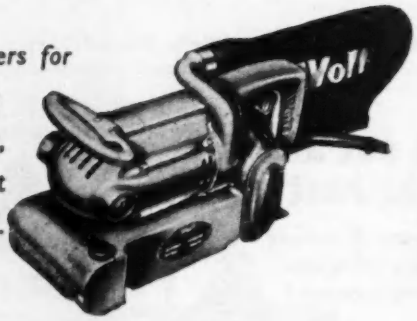

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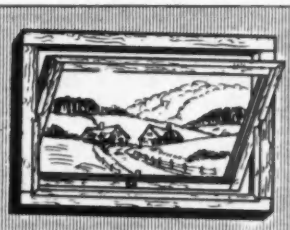

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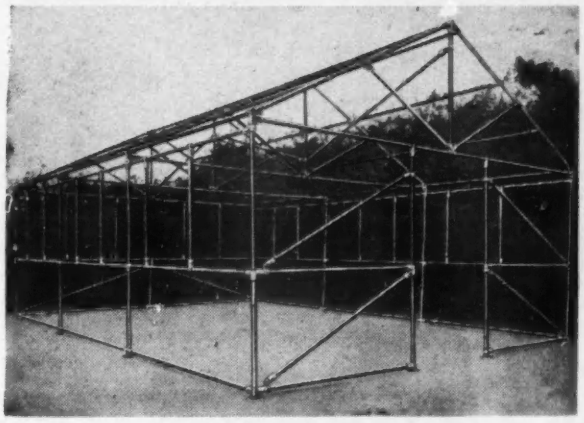

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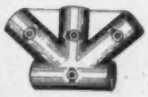
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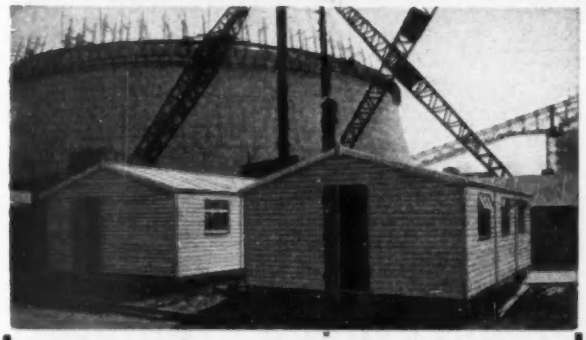

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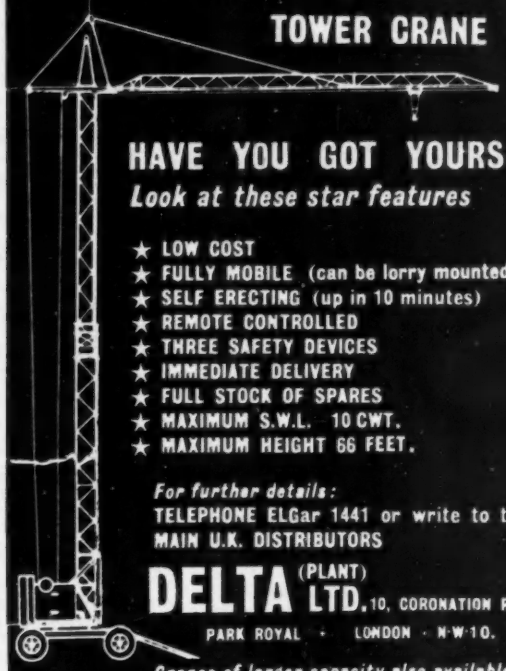

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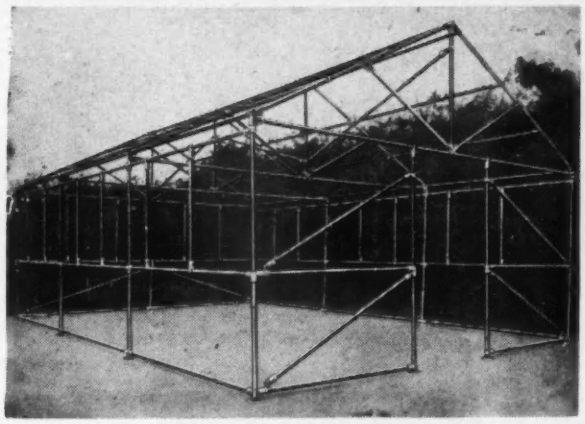

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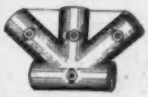
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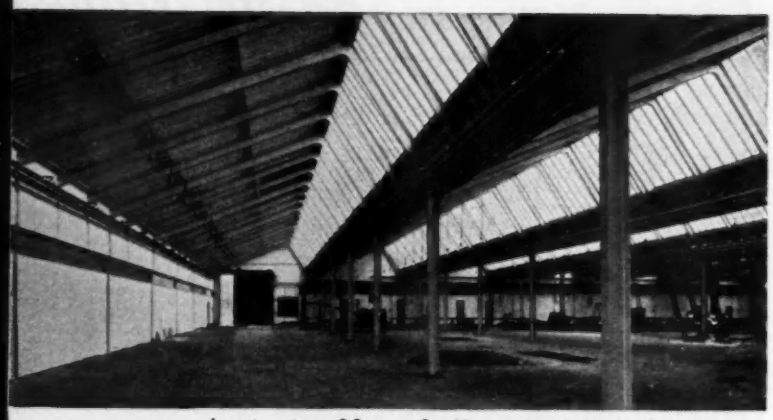

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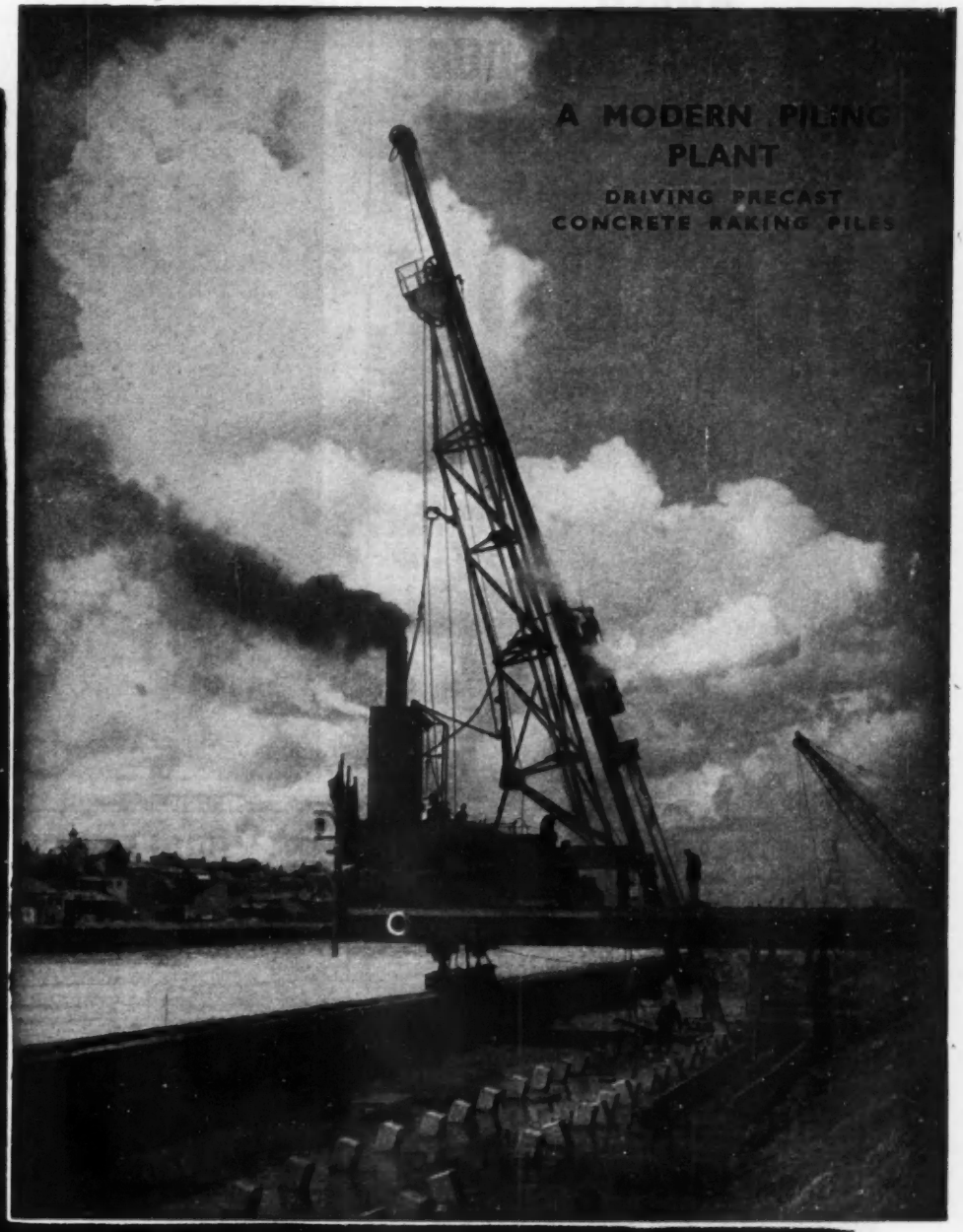

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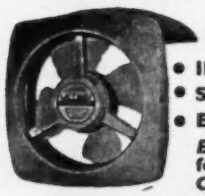

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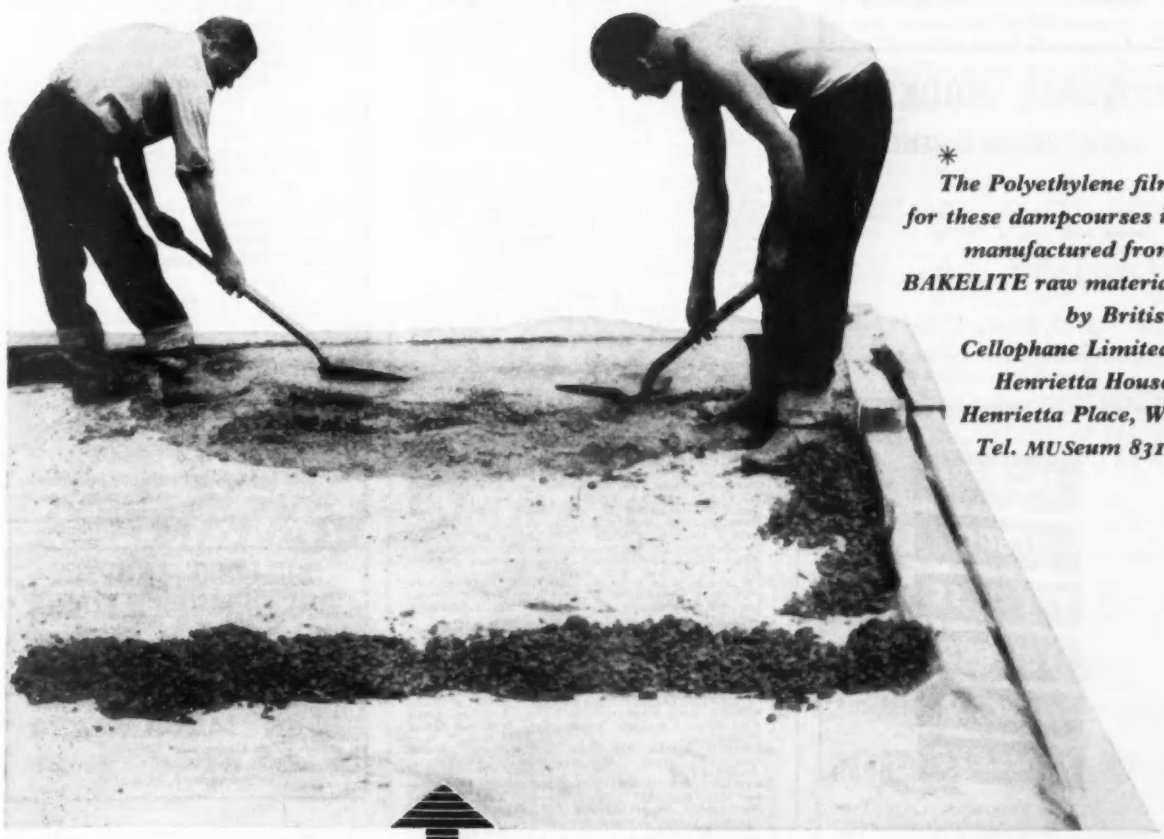

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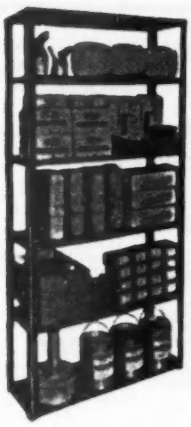

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Applications, stating training, age, experience, qualifications and salary required to G. S. Hay, F.R.I.B.A., Chief Architect, Co-operative Wholesale Society Ltd., 1 Balloon Street, Manchester 4.

G. PERCY TRENTHAM LTD.

require

1. SENIOR QUANTITY SURVEYORS
2. JUNIOR QUANTITY SURVEYORS
3. WORKERS UP

for Ford Motor Company Project at Halewood, Nr. Liverpool. Excellent prospects for suitable candidates.

Apply in writing giving full details of exerience and salary required to

Mr. J. Evans,
c/o G. Percy Trentham Ltd.,
Old Hutte Lane, Halewood, Liverpool

ASSISTANT QUANTITY SURVEYOR

required to work from London Office of large firm of Building & Civil Engineering Contractors; applicant must be experienced in Site measurement, agreement of sub-contractors' accounts, and be willing to travel to contracts between London and the South coast. Apply in writing, stating age, previous experience and salary required to :—

Box No. 1546 'The Builder'

EXPERIENCED MEASURING SURVEYOR Required by Chartered Quantity Surveyors for building and civil engineering contract at Scunthorpe. —Apply stating age, experience and salary required, to Box 1589, "The Builder."

QUANTITY SURVEYOR, Inter. standard R.I.C.S. or similar, Required in progressive professional office in Coventry, with large varied programme of work. Five-day week.—Reply stating age, experience and salary required, to Box 1592, "The Builder."

ASSISTANT QUANTITY SURVEYOR & ASSISTANT ESTIMATOR

We are seeking two Assistant Quantity Surveyors who wish to build up to positions of responsibility. The work is primarily the agreement of valuations and assistance in the preparation of final accounts on sites in the London area.
We have also a vacancy for a young Surveyor who wishes to train and gain experience in competive tendering.
To the right men there is every opportunity for advancement in an interesting career—potential for development. Generous profit sharing, savings and superannuation schemes are in operation.
Write fully stating age, qualifications, detailed experience and present salary to **Personnel Manager, Wates Limited, 1258/60 London Road, Norbury, S.W.16**

QUANTITY SURVEYORS

Required by Chartered Quantity Surveyors for 24 month tour in either Nigeria or Ghana. Preference will be given to qualified applicants. SALARY £1,500—£1,700 per annum. Fares will be paid and free accommodation provided with generous leave on completion of tour. Good opportunities for a permanent position in this country or abroad. Apply by telephone or write to

D. A. R. ROWLAND and Partners,
6, WELBECK STREET, LONDON, W.1
Telephone: HUNter 2476

CHARTERED QUANTITY SURVEYOR

required by small expanding Midlands Office for Senior position with view to partnership. Applicants should preferably be under 35 year old, have a progressive outlook and be interested in all branches of quantity surveying. Ability and adaptability (not capital) is essential.

Box No. 1457 "The Builder"

ASSISTANT QUANTITY SURVEYOR

Stirton Partners Ltd.,

the rapidly expanding Building & Civil Engineering Contractors are looking for a man who expects to go ahead. The following qualifications are required for this responsible and interesting position.

(1) Age 22-32 years.

(2) Education: at least O.N.C. or equivalent.

(3) Experience: Some professional experience preferred but not essential. Capable of measuring in all trades. Knowledge of estimating an advantage. Car Driver.

(4) Salary: An excellent salary is offered in return for loyal service.
Please send applications to

Stirton Partners Ltd.,
871 High Road, Finchley, N.12.

QUANTITY SURVEYOR, having passed I.Q.S. Intermediate or equivalent, for London office of CLARENCE E. SMART & PARTNERS, 42 Theobalds-road, W.C.1.

SMALLISH C.Q.S. FIRM Requires 6 ASSISTANTS for senior posts in London, W.C.1, Middle East and Far East. Candidates need not be qualified but must be fully competent and 28 to 40 years old. For staff in London, salary, L.V.s, Car Allowance and Pension Scheme totalling £1,500/£1,650 according to experience. Appropriate extra allowances for staff overseas.—Box 1488, "The Builder."

REQUIRED for permanent position in Yorkshire, QUANTITY SURVEYORS' ASSISTANT, fully experienced in Taking-off in all trades and measuring variation on site and preparing interim valuations. Excellent prospects to the right man.—Please reply, giving full particulars age, salary, to Box 1555, "The Builder."

WANTED: Experienced QUANTITY SURVEYOR for Contractor's Head Office in Cumberland. Must have sound knowledge of Site Measuring, Valuations, Final Accounts, etc.—Apply stating age, experience and salary required to Box 1622, "The Builder."

QUANTITY SURVEYOR (R.I.C.S. Final Standard) Required for varied and interesting work.—Please reply, in own handwriting, stating full particulars including whether married, and salary required, to CROOT & PARTNERS, 42/44 Holdenhurst-road, Bournemouth. Tel. 24255.

QUANTITY SURVEYOR, with at least 3 years' experience in Taking-off, Required by London firm of Quantity Surveyors, for work in Portsmouth branch.—Apply, stating age, experience, and salary required, to Box 1635, "The Builder."

ASSISTANT QUANTITY SURVEYOR Required. Capable of Taking-off and dealing with Accounts. Large Midlands office. 5-day week, pension scheme. —Reply, stating age, experience and salary required. Box 1663, "The Builder."

ASSISTANT QUANTITY SURVEYOR Required by S.W.16 London Building Contractors to measure Sub-Contractor's Accounts, Site Measurements, Bonus Surveying. State age, experience. Salary by arrangement.—Box 1721, "The Builder."

SENIOR ASSISTANT, young (preferably qualified) Required in small but busy Quantity Surveyors' office in Hereford for preparation of Bills and Final Accounts. Permanent position, pension scheme and ample scope for ultimate advancement to keen young man.—Write, in confidence, stating age, experience and salary required, to Box 1715, "The Builder."

WEST END firm of Chartered Quantity Surveyors have vacancies for ASSISTANT SURVEYORS. Will consider R.I.C.S. Intermediate examination level or Qualified. Work mainly in connection with site measurement and final accounts, occasional taking-off. Please write, stating experience and salary required.—Apply, Box 1720, "The Builder."

AUSTRALIA. Vacancies for TAKERS-OFF, see advert under heading "Overseas Appointments."

ASSISTANT Required to maintain library of information sheets, etc., and also to investigate the uses, methods of application and costs of (new) materials. Need not necessarily be qualified but taking-off experience essential.—Please send particulars to BASIL A. COHEN, 60 Berners-street, London, W.1.

QUANTITY SURVEYORS

Owing to our continued expansion we require the following additional quantity surveying staff.

SENIOR QUANTITY SURVEYOR with considerable experience for long term Building and Civil Engineering Contract in West Cumberland.
Quote ref: SQS/1

ASSISTANT QUANTITY SURVEYORS (2) for hydro-electric contracts in Inverness-shire and Argyllshire.
Quote ref: AQS/1

ASSISTANT QUANTITY SURVEYOR for building and civil engineering contract in Yorkshire.
Quote ref: AQS/2.

The appointments are permanent with excellent prospects and good salary. Applications giving details of age, training and experience will be treated in the strictest confidence.

The Mitchell Construction Company Ltd.
Building & Civil Engineering Contractors,
Wharf Works,
Peterborough, Northants.

SURVEYORS

BUILDING SURVEYOR Required by Chartered Surveyors with general practice. Duties will include structural surveys, building repair and maintenance works, dilapidations, etc. Applicants must be A.R.I.C.S. (Building Sub-Section) with at least two years' experience after qualifying. No Saturdays.—Apply in writing to STANLEY HICKS & SON, 23 College-hill, E.C.4.

MEASURING SURVEYOR Required to fill permanent staff vacancy. Five-day week, pension scheme.—Details of experience, salary, etc., in handwriting, to A. E. THORNTON-FIRKIN & PARTNERS, 17 Fitzhardinge-street, W.1.

BUILDING SURVEYOR wanted for maintenance of Licensed Properties. Five-day week. Contributory Staff Pension scheme offering considerable benefits both before and after retirement.—Apply stating age, experience and salary required, to Chief Architect, BENSKIN'S WATFORD BREWERY, Ltd., P.O. Box No. 105, Watford, Herts.

ASSISTANT ENGINEER/SURVEYOR

required for land surveys, design of roads and sewers, setting out and supervision of road works by direct labour. Applicants should have received professional training and have had site experience. Age 25-35. Current driving licence essential. This is a new post in an expanding department and provides excellent prospects for the right man. Non-contributary pension scheme. Applications in writing, stating age, qualifications (if any), experience and present salary to :

The Engineer & Surveyor,
A. J. Wait & Co., Ltd.,
Wellington Crescent,
NEW MALDEN, Surrey.

BUILDERS' SURVEYOR

urgently required in busy N.W. London Office. Site measuring, valuations and final accounts. Experience in measuring from drawings and specifications for estimating purposes essential, and estimating experience an advantage. Write giving full details of previous experience and salary required to :—

E. J. Lacy & Co. Limited
Steele Road, N.W.10.

ASSISTANT SURVEYOR

required

for the head office of Building and Civil Engineering Contractors in Westminster. Age 20-25. Applicants must be experienced in all phases of building surveying, from site measuring to assisting with preparation of final accounts. Apply in writing giving age, complete details of training and salary required to

Box No. 1519, "The Builder"

BUILDERS SURVEYOR

For Medium Sized Contractors shortly leaving Wimbledon for Crawley. Used to measuring sub-contractors, valuations, etc., but with ability to progress quickly to Senior position.

Car provided and good commencing salary Please reply to :

Box No. 1398 'The Builder'

TECHNICAL ORDER SURVEYOR

Permanent vacancy for fully trained Surveyor age range 26 — 38 years with H.N.C. in Building and experienced with Bills, Specifications, Drawings and can take off Material Schedules and make Joinery detail drawings for all classes of work. The position will be based at Head Office in Wolverhampton. Applicants should get in touch with us to discuss terms and conditions, **Wilson LOVATT & Sons Ltd.,** Clarence Street, Wolverhampton.

Well established medium sized Building and Contracting Company requires an experienced

BUILDERS SURVEYOR

The Company operates in London and Home Counties North of Thames. Successful applicant would, within a smoothly running organisation, be responsible for administrating contracts involving progress, subcontractors, interim payments and final accounts. The Company is controlled by three working Directors who act as Contract Supervisors.

Interesting and satisfactory position for man of ability and character. Salary £1,250 per annum plus merit bonus of about £300 per annum. A contributory pension scheme is available. Car provided and assistance given with housing accommodation.

Apply **Box No. 1676, "The Builder"**

SENIOR SURVEYOR

required by expanding Watford building firm. Must be capable of dealing with sub-contractors, interim applications, and final accounts. Excellent salary, annual bonus and pension scheme. Apply in the strictest confidence giving all relevant particulars to

Box No. 1681

TOKEN CONSTRUCTION COMPANY LIMITED

require

SURVEYOR

Experienced man required capable of controlling all types of contracts from commencement to final account.

ALSO

BONUS SURVEYORS

required.

Reply to **Personnel Director, 68, Mount Street, London, W.1.**

A. J. WAIT & CO., LTD.

require

SENIOR AND ASSISTANT SURVEYORS

for interesting Contracts in the London and Home Counties area.

Permancy and prospects for the right applicants. Apply in writing, stating age, training, experience and salary required to **Chief Surveyor, Wellington Crescent, New Malden, Surrey.**

SURVEYOR/ESTIMATOR Required by the BRISTOL STONE & CONCRETE CO., Ltd. Must be able to take-off quantities of Cast Stone, Precast Concrete Products and precast floors and roof beams from drawings. Salary is dependent on experience and qualifications. The works are situated in a country district.—Applications to Managing Director, Holcombe, nr. Bath.

SUPERVISORS/SURVEYORS Required by progressive Building Contracting Company, Weybridge. Not more than 35 years of age. Excellent opportunities to men with initiative.—Full particulars to Box 1515, "The Builder."

JUNIOR SURVEYOR Required, to work under supervision of Senior in preparing estimates and generally assist in Surveying department.—Please state age, previous experience and salary required (in strict confidence) to the Managing Director, L. & W. WHITEHEAD, Ltd., Building Contractors, 169 Clapham-road, London, S.W.9.

FRANKLIN & ANDREWS Require MEASURING SURVEYORS for Contracts in Cambridge area.—Please apply, in writing, stating age and giving details of experience, to 173/175 Fleet-street, London, E.C.4.

SURVEYORS and ASSISTANT SURVEYORS Required for interim and final accounts, etc.—Details, salary, etc., to T. RINGHAM & CO., Ltd., 4 The Broadway, S.W.19.

SURVEYOR Required for Premises Department of City Insurance Company. Age 22-25. Competence in preparation of specifications, working drawings for alterations, etc. essential. Non-contributory pension scheme. Five-day week.—Full particulars of experience, etc., and salary required, to Box 1561, "The Builder."

SURVEYOR Required by B. & C. E. Contractors, Dagenham area, capable of measuring and preparing accounts up to £500,000.—Write giving details of experience and salary required, to Box 3977, "The Builder."

BUILDING SURVEYOR Required in Contractor's office in Hatfield. Age approximately 21 years. Good opportunity for trainee with some previous experience.—Box 1544, "The Builder."

BUILDING SURVEYOR Required by multiple retailers with London headquarters. Applicants should be aged between 25/30 and have a sound knowledge of building construction. The work entails design and supervision of alterations to stores and commercial properties throughout the U.K.—Particulars of training, experience and present salary to Box 209, North Row, Marble Arch, London, W.1.

ESTIMATING SURVEYOR Required for Westminster Building Contractors. Must be capable of dealing with small works and medium-sized contracts from enquiry to final account, including supervision.—Write, stating age, experience and salary required, to Box 1521, "The Builder."

SITE MEASURING SURVEYORS Required.—Write, giving age, experience and salary required, to THURGOOD, SON & CHIDGEY, 2 Broad-street Buildings, Liverpool-street, E.C.2.

LONDON FIRM of CHARTERED QUANTITY SURVEYORS Require a MEASURING SURVEYOR in their office in the Midlands area, for preparation of final accounts and interim certificates. Good prospects. 5-day week.—Write, Box 1629, "The Builder."

SENIOR SURVEYOR Required for a Contract valued at approximately £1,500,000, in the Birmingham area. Only first-class men of proved experience should apply.—Please write, with fullest details of salary, etc., to Box 1632, "The Builder."

MEASURING SURVEYOR Required by suspended ceiling specialists. Good prospects, with pension. —Tel. MITcham 4072.

SITE MEASURING SURVEYORS Required for Harwell and Aldermaston. Interesting work on long-term contracts.—State age, experience, and salary required, to Managing Director, W. E. CHIVERS & Sons, Ltd., Devizes, Wilts. Devizes 121.

EXPERIENCED BUILDERS' SURVEYOR Required. —Write, giving full particulars, to PRESTIGE & CO., Ltd., 149 Grosvenor-road, S.W.1.

CHARTERED BUILDING SURVEYOR Required, age 30-35, with good experience in preparation of working drawings, specifications, reports, correspondence, and site supervision and co-ordination. Energy and commonsense essential.—Full details of training, experience and salary required, to W. H. Watkins, GRAY & PARTNERS, 8 Colston-avenue, Bristol 1.

BUILDER'S SURVEYOR Required. Must have sound knowledge of site measuring, variations, interim valuations, final accounts, etc.; pension scheme. Initially the successful applicant would be engaged on a large War Department contract at Aldershot, upon completion of which transfer to Southampton would be effected, subject to satisfactory results. —Apply, in writing, with all particulars, including salary expected, to BRAZIER & SON, Ltd., 303/305 Portswood-road, Southampton.

MEASURING SURVEYORS Required for Air Ministry contracts. Experience of W.D. essential. Car owners preferred. For Worcestershire, Bristol and Calne areas.—Write, stating age, details of experience, and salary required. Box 1647, "The Builder."

SURVEYING and ENGINEERING ASSISTANT Required by Civil Engineering and Building Contractors on Herts/Essex border area. Capable preparing working drawings, setting out, surveys, levelling. Salary £780 p.a.—BOYD GIBBINS, Ltd., Latchmore End, Bishop's Stortford, Herts.

SENIOR MEASURING SURVEYOR Required by Chartered Quantity Surveyors for large contracts in the London area. Experienced in interim valuations and finalising accounts. 5-day week. L.Vs. Salary according to experience.—Write details to Box 1659, "The Builder."

JUNIOR MEASURING SURVEYOR Required by Chartered Quantity Surveyors for contracts mainly in the London area. Good prospects. Five-day week. L.Vs.—Write, stating age, training and experience, to Box 1660, "The Builder."

BUILDING SURVEYOR Required in Architect's office. Preparation of specifications for and site supervision of smaller works for ecclesiastical and other works. Five-day week, L.Vs. Pension scheme. Salary in the range of £900 p.a.—LLEWELLYN SMITH & WATERS, 103 Old Brompton-road, S.W.7.

SITE MEASURING SURVEYOR, 20-26, Required by S.W.16 London Building Contractors for the South Coast at Eastbourne and Hastings. Able to measure Sub-Contractors' accounts, Variations Bonus Surveying, Valuations, Final Accounts. State age and experience. Salary by arrangement.—Box 1734, "The Builder."

The following Surveyors are required for work of national importance on sites in Berkshire—

(a) Two Site Surveyors to measure building and civil engineering works under the supervision of senior qualified Surveyors. Applicants should have a thorough knowledge of building construction and site measuring and pricing on a Schedule.

(b) One Quantity Surveyor to prepare Bills of Quantities both firm and approximate and prepare approximate estimates using a priced Schedule.

The salaries offered are in the range of **£800—£1,000** p.a. but a higher salary will be considered if the applicant has superior experience and qualifications. The salaries are inclusive of all travelling and subsistence, but a subsistence allowance would in some cases be paid for a limited period during the process of settling in and obtaining suitable accommodation. Please reply with full details of past experience and salary required etc. to

Box No. 1633, "The Builder'

GABLE CONSTRUCTION Co. Ltd.

require

JUNIOR MEASURING SURVEYOR

Permanent Position.
Good Prospects.

Write, stating age, experience, salary required etc. to :—

54 Garratt Lane, S.W.18.

THERE ARE VACANCIES ON THE STAFF OF A

LONDON CONTRACTOR

for

MEASURING SURVEYORS

The work is interesting and varied, giving a wide experience in many classes of building. There are good prospects for promotion and salaries are reviewed regularly.
Staff bonus and Pension Scheme in operation.
Successful applicants will be based at Head Office in the West End of London.
Write for interview to

Box No. 1445, 'The Builder', giving age and experience.

Surveyor required

aged 25-35 approx. for responsible position to take off quantities and prepare accurate schedules of materials for buying. H.N.C. or L.I.O.B. standard with experience in quantities and good knowledge of building construction desirable. This interesting post connected with advanced techniques is permanent, progressive and pensionable. Please apply in writing, stating age, experience, salary required to

CROUDACE LTD.,

97 Godstone Road, Caterham, Surrey

SENIOR SURVEYOR

required by

A. E. SYMES LTD.

Must be fully capable of dealing with sub-Contractors, interim applications, variations and final accounts on all types of contracts. Good salary and working conditions. Pension and life assurance schemes.

Write in first instance with full details to:—

Chief Surveyor,
236-252, High Street,
Stratford, London, E.15.

G. E. WALLIS & SONS, LIMITED

require

SURVEYOR/ESTIMATOR

for Maidstone Office. Flat available. Applications giving details of age, experience and qualifications to: The Secretary, **G. E. Wallis & Sons, Ltd., 231, Strand, W.C.2.**

PLUMBING SURVEYORS and ESTIMATOR Required. Excellent prospects for right type of man.—Apply in writing stating experience and salary required to HOME COUNTIES PLUMBING Ltd., 44 High-street, Colliers Wood, S.W.19.

SENIOR SURVEYOR. A situation exists in a well-known, old-established Builder's office for an experienced SENIOR SURVEYOR to check and agree Final Accounts. Applicants must have had considerable experience of this nature and should be over 45 years of age. Write giving full particulars of experience, salary and availability, to Secretary, C. MISKIN & SONS Ltd., Romeland House, St. Albans.

SURVEYOR Required by B. & C. E. Contractors, Dagenham area, capable of measuring and preparing accounts up to £500,000.—Write giving details of experience and salary required, to Box 3977, "The Builder."

MEASURING SURVEYOR Required by London firm of Quantity Surveyors. Permanent position with good initial salary and prospects. Luncheon vouchers. Two weeks' annual holiday rising to three weeks after three years' service with the firm.—Apply stating qualifications and experience to Box 935, "The Builder."

ASSISTANT SURVEYORS

PROPERTY COMPANY, London. ASSISTANT SURVEYOR (Maintenance). Age 20/25.—Box 922, "The Builder."

ASSISTANT BUILDING SURVEYOR Required by Multiple Shop Company to carry out surveys and building works, etc.—Apply, G. K. Deighton, RADIO RENTALS, Ltd., Seymour Mews House, Wigmore-street, London, W.1. WEL 9191.

TRAINEE SURVEYOR and ESTIMATOR Required. Good opportunity for young man desirous of becoming Estimator or Surveyor with expanding Company.—Write R. DURTNELL & SONS, Ltd., Brasted, nr. Westerham, Kent.

JUNIOR or ASSISTANT SURVEYOR wanted by West Middlesex Contractors to assist in site measurement, certifying payments to sub-contractors, taking-off, and general work in connection with interim and final accounts.—Experience, age and salary required, to Box 1662, "The Builder."

ASSISTANT BUILDING SURVEYOR Required in office of Chartered Surveyors with extensive London management and general building work. Salary £750 with prospects.—Box 1122, "The Builder."

ASSISTANT SURVEYOR, age 20/25, Required in West Country for remeasuring on site, interim valuations and Final Accounts. Salary £550 to £700.—Box 1696, "The Builder."

ASSISTANT SITE SURVEYORS

required by National Contractors for Contracts in London and the Home Counties. Good prospects and permanency. Pension and Bonus Schemes operated. Details of experience and salary required should be sent to:

Box No. 1640, "The Builder"

ASSISTANT SURVEYOR (Inter. I.Q.S. standard) Required for varied and interesting duties offering ample opportunity to widen experience and progress to senior work. Salary commensurate with ability. Congenial working conditions.—Apply C. J. Champion, Esq., LOWTON CONSTRUCTION CO., Ltd., 47-51 Balham High-road, S.W.12. Telephone: BALham 0121.

JUNIORS

JUNIOR Required in Quantity Surveyor's London office. Good opportunity for person interested in learning the profession.—Please reply in own handwriting giving details of age, education, etc., to A. E. THORNTON-FIRKIN & PARTNERS, 17 Fitzhardinge-street, W.1.

JUNIOR ASSISTANT. Vacancy in London Property Company for young man with knowledge of property, and ambition. South London resident essential.—Apply, Ref. S, Box 1585, "The Builder."

YOUTH Required as TRAINEE in Quantity Surveyors' office. Good opportunity if keen and with five passes G.C.E. Five-day week.—Apply, giving particulars and age, to DENIS TYRRELL & PARTNERS, 1 Newman-street, W.1.

JUNIOR Required in City Chartered Quantity Surveyors' office. Opportunity to learn the profession.—Write, in own handwriting, giving age, education, etc., to Box 1672, "The Builder."

TRAINEE Required for Contracts Department. Young man in his 20's with experience of small or medium-size Builders will find this an excellent opportunity to join a medium-size firm of expanding Contractors with outstanding prospects.—Box 1665, "The Builder."

TAKERS OFF

JUNIOR TAKER-OFF Required by West End Chartered Quantity Surveyor. Salary £800 to £900 p.a.—Reply in writing stating age and experience to Box 979, "The Builder."

TAKER-OFF Required by West End Chartered Quantity Surveyor. Salary £1,000 to £1,200 p.a.—Reply in writing stating age and experience to Box 984, "The Builder."

SENIOR TAKER-OFF Required by West End Chartered Quantity Surveyor. Salary £1,200 to £1,500 p.a.—Reply, in writing, stating age and experience to Box 961, "The Builder."

EXPERIENCED TAKER-OFF Required by Westminster Quantity Surveyors for responsible post. Excellent prospects. Lunch vouchers. Five-day week.—Write, stating age, experience and salary required, to Box 991, "The Builder."

SENIOR and JUNIOR TAKERS-OFF Required by West End Chartered Quantity Surveyors for permanent staff.—Write, stating age, experience and salary required, to Box 908, "The Builder."

EXPERIENCED TAKER-OFF Required by firm of Quantity Surveyors, Westminster. Starting salary not less than £1,200 and according to qualifications and experience, with good prospects. Salary reviewed regularly. Luncheon vouchers.—Apply, Box 933, "The Builder."

MANCHESTER.—London Quantity Surveyors Require experienced TAKER-OFF for interesting work in the North-West area. Five-day week. Superannuation scheme after trial period.—Box 945, "The Builder."

JUNIOR TAKER-OFF Required for busy West End office handling very varied types of contract. The position is a suitable one for an enthusiastic man anxious to gain experience quickly. No Sats. 9.15-5.15.—Write stating age, experience, etc., to Box 994, "The Builder."

SENIOR and Junior TAKER-OFF Required by London Chartered Quantity Surveyors.—Please reply, stating age, experience and salary required, to G. F. K. WHITE & HAYTON, F/F.R.I.C.S., 38/39 Parliament-street, S.W.1.

EXPERIENCED TAKER-OFF Required.—Write giving full details to MARKHAM & PARTNERS, Grosvenor-gardens House, S.W.1.

TAKERS-OFF Required for Birmingham and Nottingham offices. Permanent positions offering scope. Salary range £750-£1,100 according to experience. Full details to JOHN C. BARNSLEY, F.R.I.C.S., 84 St. Mary's Row, Moseley, Birmingham 13.

CHARTERED QUANTITY SURVEYORS Require TAKER-OFF (A.R.I.C.S.) for medium-size varied London practice. High salary scales paid to suitable applicants with security and prospects. Only Takers-off willing to take responsibility and work hard and efficiently for a salary above average need apply.—Please write, Box 1443, "The Builder."

RECENTLY QUALIFIED TAKER-OFF Required in Quantity Surveyor's office in Victoria area. Excellent prospects for advancement. Superannuation scheme, Luncheon Vouchers and increased payment when working overtime.—Write, stating age, experience and salary required, to Box 1485, "The Builder."

TAKER-OFF Required in Quantity Surveyor's office Portsmouth-Southampton area.—Write, stating age, experience and salary required, to Box 1486, "The Builder."

CHARTERED QUANTITY SURVEYORS, Victoria Street, Require JUNIOR TAKER-OFF for interesting and varied work. L.V. State salary and experience.—Box 1504, "The Builder."

PERMANENT position for a Senior TAKER-OFF (A.R.I.C.S.) with London Quantity Surveyors. Salary £1,750 per annum plus overtime. Five-day week. Pension and Life Assurance scheme.—Write stating age and experience to Box 1604, "The Builder."

JUNIOR TAKER-OFF Required by London Quantity Surveyors. Progressive position. Good salary according to experience. Pension and Life Assurance scheme.—Write stating age, experience and salary required, to Box 1605, "The Builder."

SENIOR and JUNIOR TAKER-OFF Required by medium-sized London Chartered Quantity Surveyors for permanent positions. 5-day week. Non-contributory pension scheme.—Please write, giving details of experience, age and salary required, to Box 1602, "The Builder."

AN opportunity for a Taker-off with sound professional training to join an expanding firm of Chartered Quantity Surveyors offering varied and interesting duties including following contracts through to completion. Team spirit essential.—Please write stating age, experience and present salary to RAYMOND J. PLAYLE, A.R.I.C.S., 96 Eltham-road, S.E.12.

PROMOTIONAL PROSPECTS

offered to

AN ASSISTANT TAKER-OFF

with drive and initiative, capable of accepting responsibility and making decisions. Position offers scope of advancement with consequent salary increases.

Write, in confidence, giving full details of past experience, salaries and employers, to:

Box No. 1690, "The Builder"

BOURNEMOUTH & WORTHING

A TAKER-OFF

is required at both the above offices of a professional Quantity Surveyor.

Reply in confidence stating age, experience, qualifications and salary required to

Box 1710 "The Builder"

EXPANDING practice South-East London Requires TAKER-OFF with sound professional training. Excellent prospects for the right man. State experience and present salary to Box 925, "The Builder."

SENIOR and JUNIOR TAKERS-OFF (preferably A.R.I.C.S.), between ages of 25/35, Required by GLEEDS, 106 Regent-street, W.1. Office hours 9.30 a.m.-6 p.m., five-day week.—Please telephone REGent 5111 for appointment.

JUNIOR TAKER-OFF Required in small Knightsbridge Quantity Surveyors' office. Good prospects. Opportunity to gain experience in all branches of the profession.—Reply, with particulars, to Box 1567, "The Builder."

JUNIOR TAKER-OFF Required in Chartered Quantity Surveyors' office, Holborn area. Good prospects for advancement. 5-day week. L.Vs.—Write, Box 1628, "The Builder."

TAKER-OFF Required by Westminster Chartered Quantity Surveyor's office. L.Vs. Write, in own handwriting, giving details of experience and salary required.—Box 1623, "The Builder."

ASSISTANT SURVEYOR Required of not less than Intermediate standard and experienced in working-up. Varied work and five-day week.—Apply, stating age, experience and salary required, to DENIS TYRRELL & PARTNERS, 1 Newman-street, W.1.

JUNIOR TAKER-OFF for Chartered Quantity Surveyors' offices, Waterloo and Victoria. Salary up to £1,000. Pension scheme, permanent position, excellent prospects, five-day week, canteen.—Box 1657, "The Builder."

TAKER-OFF for Chartered Quantity Surveyors, Victoria and Waterloo areas. Salary up to £1,500. Pension scheme, permanent position, excellent prospects, five-day week, canteen.—Box 1658, "The Builder."

JUNIOR TAKER-OFF of intermediate or final standard for small City office. Three weeks holiday, 1½-overtime, L.Vs. and Superannuation. Excellent future partnership prospects. Please state age, experience and salary expected.—Box 1648, "The Builder."

TAKER-OFF Required for head office in Victoria. Permanent position, five-day week, overtime paid, pension scheme after six months' service.—Reply stating age, experience and salary required, to MESSRS. LANE AND JEWELL, 15 Buckingham Palace-gardens, S.W.1.

GOOD OPPORTUNITY may occur in near future for free-lance TAKER-OFF, to assist professional firm, must be capable of high standard of work coupled with high output ability in return for commensurate remuneration promptly paid.—Write, stating details of experience and availability, to Box 1685, "The Builder."

EXPERIENCED TAKER-OFF Required in West End London Quantity Surveyors' office.—Reply, stating age, experience and salary required, to Box 1682, "The Builder."

TAKER-OFF, Final standard, Required. L.Vs., Pension scheme.—Write giving full details to BRYDEN & WOODFORD, 33 Catherine-place, Westminster, S.W.1.

CHARTERED QUANTITY SURVEYORS, Westminster, have vacancy for experienced TAKER-OFF. L.Vs., Pension scheme.—Apply Box 1728, "The Builder."

EXPERIENCED TAKER-OFF Required by London firm of Chartered Quantity Surveyors. Luncheon vouchers. Five-day week. Overtime paid. Pension scheme.—Please write stating age, experience and salary required to Box 1722, "The Builder."

TAKERS-OFF, qualified R.I.C.S. 1956 to 1960. Required by DEARLE & HENDERSON for London and Maidstone.—Reply 75 Victoria-street, S.W.1, or Tel.: ABB 2841.

SENIOR AND JUNIOR TAKERS-OFF Required by C.Q.S. in West Sussex. Five-day week. L.Vs. Write stating age, experience and salary required.—Box 1694, "The Builder."

AUSTRALIA. Vacancies for TAKERS-OFF, see advert. under heading "Overseas Appointments."

TAKER-OFF Required, recently qualified or studying for Final, to work in small but busy Chartered Quantity Surveyor's office in Croydon to help in the Taking-off, preparation of Bills of Quantities, measurement on site and final accounts of interesting and varied work in London and elsewhere.—Reply for this permanent situation stating age, experience and salary commensurate with experience, to SARJEANT, STIMPSON & PARTNERS, 78 Park-lane, Croydon, Surrey.

QUANTITY SURVEYOR, A.R.I.C.S. or equivalent, Required for short stay (5-8 weeks) in Nigeria mid-October. Salary £40 per week. All expenses and air fares paid; transport and free furnished accommodation provided. Possibility of extending stay for a normal tour by agreement.—Box 1719, "The Builder."

TAKER-OFF Required, age 24-30. Some unusually interesting contracts. High salary for round peg in round hole. London, W.1.—Box 1451, "The Builder."

TAKER-OFF Required by West End Chartered Quantity Surveyors.—Please telephone (not Saturday) ALFRED J. H. SPRAGUE AND SON, 72 New Cavendish-street, W.1. LAN 4155, for appointment.

WORKERS UP

WORKER-UP Required by firm of Quantity Surveyors, Westminster. Five-day week and Luncheon Vouchers. Good prospects and opportunities for the right man.—Apply stating age and experience to Box 980, "The Builder."

EXPERIENCED WORKER-UP Required by firm of Chartered Quantity Surveyors in West End, London.—Reply stating experience, age, salary required to Box 931, "The Builder."

WORKERS-UP Required, Senior and Junior for office of Chartered Quantity Surveyors in the Holborn area.—Box 913, "The Builder."

PERMANENT vacancy for an experienced WORKER-UP with firm of Quantity Surveyors, Westminster. Five-day week. Luncheon vouchers. Salary according to qualifications and experience and reviewed regularly.—Apply Box 936, "The Builder."

WORKER-UP Required by Central London C.Q.S. Five-day week, L.Vs.—Reply stating age, experience, salary required.—Box 982, "The Builder."

WORKERS-UP Required by London Chartered Quantity Surveyors for permanent staff.—Write stating age, experience and salary required to Box 998, "The Builder."

WORKERS-UP (Male or Female) Required for Birmingham and Nottingham offices. Permanent positions offering scope. Salary range £450-£600 according to years of experience.—Full details to JOHN C. BARNSLEY, F.R.I.C.S., 84 St. Mary's row, Moseley, Birmingham, 13.

SENIOR WORKER-UP Required for Holborn Chartered Quantity Surveyors. Security for right applicant willing to make working-up his career. Good salary in return for hard work and competence.—Please write, stating age, experience and salary required, to Box 1444, "The Builder."

WORKER-UP for long-term contract at Newport, Mon., Required by firm of Chartered Quantity Surveyors. Rented accommodation available.—Please apply, stating age, experience and salary required to Box 1590, "The Builder."

EXPERIENCED WORKER-UP Required by London firm of Quantity Surveyors. Salary £850 to £1,000 according to age and experience. Pension and Life Assurance scheme. Five-day week.—Box 1606, "The Builder."

TAKER OFF / MEASURING SURVEYOR (A.R.I.C.S.) Required by London Quantity Surveyors. Five-day week. Pension and Life Assurance scheme. Salary £1,500 per annum. Car provided.—Write stating age and experience to Box 1607, "The Builder."

TWO EXPERIENCED WORKERS-UP Required by Chartered Quantity Surveyors in Bloomsbury. Permanent position if suitable.—Please reply, stating age, experience and salary required, to Box 1603, "The Builder."

WORKER-UP Required by LESLIE G. DIGHT, F.R.I.C.S., 35 Portland-place, W.1. Salary about £650 to £800 p.a. according to age and experience.—Reply stating age, experience and salary required.

EXPERIENCED WORKER-UP Required in London Chartered Quantity Surveyors' office. Must be over 23 years of age with at least four years' office experience of working-up.—Reply, stating age, experience and salary required, Box 1673, "The Builder."

EXPERIENCED WORKER-UP Required in West End London Quantity Surveyors' office.—Reply, stating age, experience and salary required, to Box 1683, "The Builder."

FIRM of Chartered Quantity Surveyors have permanent vacancy in their London office for WORKER-UP. Luncheon vouchers. Pension scheme. Overtime paid.—Please write stating age and experience to Box 1723, "The Builder."

EXPERIENCED WORKER-UP Required in London Chartered Quantity Surveyors' office—will be deputy to the Chief Worker-up.—Box 1725, "The Builder."

WORKER-UP and WORKER-UP/SITE MEASURER Required by C.Q.S. in West Sussex. Five-day week, L.Vs. Write, stating age, experience and salary required.—Box 1695, "The Builder."

EXPERIENCED WORKER-UP Required for expanding and progressive Quantity Surveyor's offices in South Kensington. Opportunity to take control of department. £800-£1,000 according to experience. L.Vs.

WORKER-UP Required by West End Chartered Quantity Surveyors.—Please telephone (not Saturday) ALFRED J. H. SPRAGUE AND SON, 72 New Cavendish-street, W.1. LAN 4155, for appointment.

WORKER-UP, minimum 3 years' experience, Required by busy Chartered Quantity Surveyors. Excellent opportunity offered to keen worker wishing to form part of team in young growing practice.—L. R. KINSLER & PARTNERS. HYD 5522.

WORKER-UP Required by Richmond, Surrey, Quantity Surveyor, with minimum 4 years' professional experience, for permanent position.—Write stating age, experience and salary required, to Box 1733, "The Builder."

WORKER-UP Required by WOOD AND WEIR of 5 Wigmore-street, W.1. Five-day week and luncheon vouchers.—Reply stating age, experience and salary required, or telephone LANgham 4617.

BOURNEMOUTH & WORTHING
A WORKER-UP

is required at both the above offices of a professional Quantity Surveyor. The successful applicant has possibilities of being introduced to taking off and must have had at least two years' working up experience.

Reply in confidence stating age, experience, qualifications and salary required to

Box. No. 1711, "The Builder"

ENGINEERS

ENGINEER, capable of designing all classes of reinforced concrete structures, Required by INDENTED BAR & CONCRETE ENGINEERING CO., Ltd., 171 Victoria-street, London, S.W.1.—Apply by letter only, giving full details of experience.

SENIOR and Junior SITE ENGINEERS and QUANTITY SURVEYORS are Required for Civil Engineering and Building Contracts in England and Wales. These are permanent appointments with good prospects. Bonus and superannuation schemes in operation.—Applications, which will be dealt with in strict confidence, must give details of age, experience, qualifications and salary required, and should be addressed to Personnel Officer, TARMAC CIVIL ENGINEERING, Ltd., Ettingshall, Wolverhampton.

CONSULTING ENGINEERS in Westminster Require ENGINEER to take charge of site investigations and soil mechanics laboratory. The post offers excellent scope for a well qualified, energetic man. Full details to Box 1439, "The Builder."

SITE ENGINEERS Required for building contracts London area. Must have considerable experience in multi-storey concrete framed buildings. Good salary for men with initiative.—Apply in writing, stating age and experience, M. J. GLEESON (CONTRACTORS), Ltd., Haredon House, London-road, North Cheam, Surrey.

TECHNICAL ASSISTANT Required by Precast Concrete Manufacturers. Experienced in Detailing Precast Reinforced Concrete and Taking-off materials. Good opportunity for young man.—Write, stating age, experience and salary required, to THE MODULAR CONCRETE CO., Staines-road, Bedfont, Middlesex.

CIVIL ENGINEER

required by firm engaged on public works. Applicant should have had at least five years previous site experience and be capable of setting out and supervising works. This is a progressive appointment and is based in London. Apply giving details of age, experience, salary required and when available.

Box No. 1411, "The Builder"

SITE ENGINEERS

If you are ambitious and anxious for rapid promotion in a position with responsibility and salary and are young with a few years' setting-out experience on Contracts, we have several positions open and invite you to get in touch with us to discuss details, terms and conditions.

WILSON LOVATT & SONS LTD.,
Clarence Street,
Wolverhampton

ESTIMATORS

JUNIOR ASSISTANTS Required for Estimating Department of medium-sized London Building Contractors.—Details to: A. ROBERTS & CO., Ltd., 79 Eccleston-square, Victoria, S.W.1.

ESTIMATOR/SUPERVISOR Required for long-established Building and Decorating firm in Hampstead, London. Sound knowledge of good-class maintenance and decorating work essential.—Write stating age, experience and salary required.—Box 1361, "The Builder."

SHEPHERD

PLANNING SURVEYOR

Applications are invited from young men, preferably under 35 years of age who have had sound experience of Quantity Surveying and are interested in the application of modern planning and production techniques in the building industry.

The successful applicant will be on the permanent staff of our Richmond (Yorks.) Area Office which is responsible for contracts throughout a wide area in the North Riding of Yorkshire and Co. Durham.

Some travelling will be involved and a private car will be provided.

A good starting salary will be offered together with annual bonus and non-contributory pension and life assurance. Excellent staff conditions include a five day week and three weeks annual holiday. Assistance with housing will be available if required.

Written applications stating age, full details of education and experience should be addressed for the personal attention of:

W. E. Marshall, A.I.O.B.,
Area General Manager,
F. SHEPHERD & SON LTD.,
Building and Civil Engineering Contractors
Lion House, Pottergate,
Richmond.

ESTIMATORS SENIOR & ASSISTANT

Required immediately. Must be fully experienced in pricing all types of B. & C.E. Works. Pension and Life Assurance Scheme. Apply, full details, age, experience, salary required, to :—

Managing Director,
F. R. HIPPERSON & SON LTD.,
Invicta House,
Dagenham, Essex.

BUILDING ESTIMATOR

If you are young and have H.N.C. or L.I.O.B. in Building and some experience in building up prices for estimating we have a progressive vacancy and offer a good salary to a suitable applicant. Please get in touch with

WILSON LOVATT & SONS LTD.,
Clarence Street,
Wolverhampton

HENRY BOOT & SONS (BUILDING) LTD.

invite applications for the following vacancies in their Sheffield office.

EXPERIENCED ESTIMATOR/SURVEYOR Must be experienced in tendering for all types of contracts in competition.

TWO EXPERIENCED BUILDING SURVEYORS with sound knowledge of site measuring variations, interim valuations, final accounts etc. The work will also entail pre-planning Houses for Sale contracts.

ASSISTANT BUILDING SURVEYOR with a knowledge of contract measurements etc. Further training will be given with good prospects of promotion.

All positions are permanent, a profit sharing scheme is in operation. Pension scheme for approved cases.

Applicants should apply in writing, stating age, qualifications, experience and salary required to:——

Henry Boot & Sons (Building) Ltd.,
Banner Cross Hall, Sheffield 11.

BUILDING ESTIMATOR

An opportunity exists for a man experienced in estimating for all types of building works and preferably having A.I.B.E., L.I.O.B. or H.N.C. qualifications. Should you be a suitable applicant we can offer a good salary and favourable conditions.

Please get in touch with,

WILSON LOVATT & SONS LTD.,
Clarence Street, Wolverhampton.

ESTIMATOR/SURVEYOR

required by

A. H. ANDERSON LTD.

This Company, which provides a complete design and management service to the Architect and/or the Building Owner, in connection with its method of construction known as A.75, requires a young professional or contract trained Surveyor, who has some experience of taking-off, estimating, and settlement of final accounts.

A young, ambitious man is required, who will be given the opportunity, after a suitable period, to enter the field of contract management.

Applications in writing to:—

The Chief Surveyor,
A. H. ANDERSON LIMITED,
66 Victoria Street, London, S.W.1.

ESTIMATOR/SURVEYOR Required for small works department operating from Greenford, Middlesex, carrying out maintenance work and improvements to the group's properties including shops, departmental stores, factories, warehouses, etc.—Write for full information to Box B761, LPE, Romano House, 399/401, Strand, London.

EXPERIENCED ESTIMATOR and SURVEYOR Required. Taking-off quantities and pricing same, pricing Bills of Quantities, etc. Old-established Surrey builders.—Please reply, in writing, stating age, experience and salary required. Car driver essential.—Box 1576, "The Builder."

ESTIMATOR experienced in Metal Windows, Ventilators, Sheet Metal work Required for rapidly expanding department. Position of responsibility. Good prospects. Pension scheme, etc.—Write giving full particulars and salary required to the Managing Director, LENSCRETE, Ltd. (Litex Department), Queen's Circus, London, S.W.8.

MANCHESTER. ESTIMATOR Required by firm of Quantity Surveyors for site office. Preference to man with experience on mechanical and engineering works. Basic salary up to £1,100 per annum. —Box 1409, "The Builder."

JOINERY ESTIMATOR Required for S.E. London joinery company carrying out joinery for the trade. Modern factory and equipment and working conditions. Must be capable of estimating, costing and rendering final accounts. Permanent position. Pension scheme.—State age, experience and salary required, Box 1460, "The Builder."

JOINERY ESTIMATOR Required for large modern Joinery Works. Able to price Bills of Quantities and estimate from plans. Progressive post for ambitious applicant. Pension scheme.—W. H. GAZE & SONS, Ltd., The Gazeway, Portsmouth-road, Thames Ditton. Emberbrook 5511.

NATIONAL BUILDING AND CIVIL ENGINEERING CONTRACTORS

invite applications from young men for a position as

ESTIMATING ASSISTANT

The post would suit a man who has completed a course of training in either surveying or estimating and is now seeking an opportunity of gaining further experience with excellent prospects of advancement.

Please send full details, with an indication of salary required to

Box No. N.B. 3841. A.K. Advg.,
212a, Shaftesbury Avenue, London, W.C.2.

GALBRAITH BROS. LTD.

require

ASSISTANT ESTIMATORS

for permanent and progressive positions at both London and Crayford Offices. Applicants should have sound knowledge of building up prices and would work directly under supervision of Chief Estimator.

ASSISTANT SURVEYORS

for permanent progressive positions at Crayford Office. Applicants should be capable of taking off quantities, site measuring, preparing valuations etc., and should preferably have knowledge of planning and cost control of contracts.

Apply in writing to Crayford Bridge, Crayford, Kent, stating age, experience and salary required.

ESTIMATOR/SURVEYOR

required by progressive firm N.E. London Excellent prospects for suitable applicant. Apply in writing, stating age, experience and salary required to

Box No. 921 "The Builder"

ESTIMATORS SENIOR & ASSISTANT

Required immediately. Must be fully experienced in pricing all types of B. and C.E. Works. Pension and Life Assurance Scheme. Apply, full details, age, experience, salary required, to:

Managing Director,
F. R. HIPPERSON & SON LTD.,
Invicta House,
Dagenham, Essex.

ESTIMATOR/SURVEYOR Required immediately. Applications are welcomed from young men between the ages of 25-35, who have had a thorough training and experience in estimating for contracts up to £100,000 in value and the settlement of final accounts. A Staff Pension and Assurance scheme is in operation. Salary £1,000-£1,250 per annum according to ability. Applicants should write giving brief details of general and technical education and experience to DEARSLEY & CARTER, Ltd., 91/93 King-street, Hammersmith, W.6.

JUNIOR ESTIMATOR with some previous experience Required for small Works Department of City Builder.—Apply in writing to Secretary, WILLIAM VERRY, Ltd., 34/39 East Smithfield, London, E.1.

T. G. CONSTRUCTION COMPANY LTD.

MEMBER OF THE TARMAC GROUP

require a

Senior Estimator

for building works up to £500,000 in value. Applications are invited from experienced estimators in the 30-40 age group who have concentrated in this range of tendering. Pension and Life Assurance scheme in operation. Car provided. Only first-class men with the qualifications and experience required should apply to the

Personnel Officer

T. G. CONSTRUCTION COMPANY LTD.

Ettingshall, Wolverhampton.

TOP CLASS ESTIMATOR/SURVEYOR

required for expanding firm of Building and Civil Engineering Contractors. Excellent prospects for keen man. Write stating age, experience and salary required to:

J. HAWKINS & SON LTD., BEACH AVENUE, CLEVEDON, SOM.

ESTIMATOR/SURVEYOR Required. Experienced in tendering for contracts up to £60,000, preparing valuations for certificates, adjusting variations and dealing with final accounts.—Please reply, giving brief outline of experience, age and salary required (which will be treated in strict confidence) addressed to the Managing Director, L. & W. WHITEHEAD, Ltd., Building Contractors, 169 Clapham-road, London, S.W.9.

ASSISTANT Required for Estimating Department dealing with enquiries from jobbing to £500,000. Some experience in estimating with good knowledge of building construction.—Apply in writing to J. LAWSON & CO., Ltd., 28 Park-road North, Acton, W.3, endorsed "Estimator, Personal," giving full details, together with salary required.

ESTIMATOR Required for small works Department. Must be fully experienced in Site Measurement all trades, Taking-off and Pricing from Drawings and Specifications and preparing Interim Certificates and Final Accounts.—Apply in writing stating age, experience, and salary required, to GRACE & MARSH, Ltd., New Bridge Works, Waddon, Croydon.

ESTIMATOR Required by medium-sized Building Contractors on South coast. Experience in pricing jobbing and contracts up to £20,000 essential.—Write stating age, experience and salary expected, to Box 1539, "The Builder."

ASSISTANT ESTIMATOR Required by West End Building Contractor. Contributory Pension Scheme and car. Write full details of experience and salary required.—Box 1502, "The Builder."

ESTIMATOR REQUIRED

with sound knowledge of all types of Building Contracts for rapidly expanding mix-Sussex Estate Developers and Contractors. Salary by arrangement. Opportunities outstanding. Apply **Box No. 1627, "The Builder"**

NATIONAL ROOFING SPECIALISTS have an interesting, responsible, superannuated, position open for an ESTIMATOR/SURVEYOR in their London office. Five-day week, free luncheon.—Write details of age, qualifications if any, experience and commencing salary required, to Box 1620, "The Builder."

ASSISTANT ESTIMATOR Required for varied and interesting work including taking-off, site measuring, targeting, planning and job management in all classes of building work. Applicants should have had some experience in pricing bills. Excellent prospects to progress with this expanding group of companies.—Apply to Mr. Lott, R. D. HOPE & CO., Ltd., 15 Selsdon-road, South Croydon, Surrey. CROydon 9262.

ESTIMATOR and SURVEYOR Required for small property development company in N.W. Kent. Full responsibility for this department offered.—Particulars and salary required, to Box 1642, "The Builder."

ESTIMATOR/SURVEYOR Required by medium-sized old-established Contractors in S.E. Lancs. I.O.B. preferred. Excellent opportunity.—State age, experience and salary required, to Box 1630, "The Builder."

ESTIMATOR Required Barnes S.W. area. Conversions, Alterations, Decorating and General Maintenance repairs up to £5,000. Sound knowledge of the trade and capable of handling works from commencement to final account. Salary £18 per week. Write stating age, experience, whether car driver and when free to accept new situation.—Box 1645, "The Builder."

F. W. SHANKS Ltd., Building and Civil Engineering Contractors, Hunstanton, Norfolk, have a vacancy on their permanent staff for an ESTIMATOR/SURVEYOR. Applications are invited from men age 25-45 who, preferably, have gained experience with medium-size firms, in both building and civil engineering work. Written applications must give age, fullest details of education, training and experience, with salary required, indicating when free to accept appointment.

ESTIMATOR/SURVEYOR Required by large London Builders. Must have had experience in Measuring Sub-Contractors all trades and dealing with Variations. Excellent opportunity for young man with some knowledge of preparation of small Estimates. Situation permanent and pensionable, alternative Saturdays free.—Reply stating age, experience and salary required, to Box 1730, "The Builder."

EXPERIENCED ESTIMATOR Required by London Building Contractors for tendering mainly on Bills of Quantities for various types of work up to £200,000 in value. Permanent and pensionable position. Apply, stating age, experience and salary range contemplated.—Box 1674, "The Builder."

COMPETENT and fully experienced ESTIMATOR and SURVEYOR Required, capable of dealing with works up to £25,000 required by established General Building Contractors in N.W. London.—Write, or telephone, The Manager, HOSIER & DICKINSON, Ltd., Brent Sidings, Edgware-road, N.W.2. GLA 8611/2/3, stating details of past experience, age and salary required, etc.

PAINTING ESTIMATOR Required for N.W. London Building Contractors. Must be experienced in all classes of work with an up-to-date knowledge of the Industry. Car driver preferred.—Write, stating age, experience and salary required, to Box "L.H.", c/o J. W. VICKERS & CO., Ltd., 7 Great Winchester-street, E.C.2.

JOINERY ESTIMATOR Required by Building Contractors for Joinery Works. Good salary and progressive post with Pension Scheme and other attractive conditions.—Box 1717, "The Builder."

MANAGERS

JOINERY MANAGER

to take full control of expanding (30 operatives at present) West Riding works dealing mainly with high quality purpose-made joinery. Must be capable estimator. Attractive salary and conditions.—Full details to

Box No. 1573, "The Builder"

AREA MANAGERS PROJECT MANAGERS and TOP GRADE AGENTS

required by rapidly expanding national contractors for major building contracts valued at between £200,000 and £4,000,000. These are senior and permanent positions and high salaries will be paid to suitable applicants.

Please submit details in strict confidence to:

Box No. 1641, "The Builder"

CONTRACTS MANAGER

Medium sized firm of builders require an additional Contracts Manager responsible to Contracts Director. Full details, including approximate salary expected to

Charles S. Foster & Sons Ltd. Loughton, Essex.

An ASSISTANT SALES MANAGER

required by

JOINERY MANUFACTURERS

A progressive position for a man who has a knowledge of Joinery or kindred trade. Rapid expansion is taking place and a good future is assured. Apply stating age and present salary to:—

S. A. Grant, Austins of East Ham Ltd., London, E.6.

STORES OFFICE MANAGER. Must be fully conversant with stores procedure, able to control male and female staff, manual and clerical. Knowledge of contractors' tools, plant and vehicle spares essential. Good prospect for right man to assume full control of section.—Write details of experience and salary to Box 1537, "The Builder."

MANAGER Required for Building and Civil Engineering Contractors, Birmingham. Commencing salary £2,000 per year plus car. Good prospects. Only fully experienced and good-class men need apply. All replies treated in strictest confidence.—Write, giving full details, Box 1621, "The Builder."

CHIEF CONTRACTS MANAGER

To take full charge of Contracts Department of medium-size London Contractors.

Applicants should be between 35 and 55 with a sound technical knowledge and extensive experience in the management of Contracts. An intimate knowledge of pre-planning and progressing is essential. Applicants should have received initial training in either Engineering or Surveying.

The Company has a history of continuous expansion and the position offers an exceptional opportunity for an energetic Manager able to produce results.

Box 1666, "The Builder"

Applications are invited for the following positions in the Structural Engineering Section of a major Building and Civil Engineering Contractor.

Contracts Manager

preferably a qualified Structural Engineer who has had good experience in charge of large contracts.

Site Engineer

preferably qualified and experienced in setting out on large contracts. A knowledge of concrete control would be an asset.

Engineer-Draughtsman

with good experience in temporary works design and design of shuttering.

The appointments are to the permanent staff and offer excellent opportunities for advancement. Good salary and conditions. Bonus and superannuation schemes are in operation.

Please send full details to Box CM. 3875, A.K. Advtg. 212a Shaftesbury Ave., LONDON, W.C.2.

CONTRACTS MANAGER

Contracts Manager required by leading West Country Contractors, to be between the age of 30-40, fully competent to supervise several Building & light Civil Engineering contracts. Only men experienced in this work should apply for this responsible and pensionable position. Write stating salary required, age, qualifications and previous experience.

T. HOLDOWAY & SONS LTD.,
Westbury, Wiltshire.

MANAGER Required for old-established firm of Building Contractors. Apply by letter stating age, experience and salary required. House available.—ALFRED GROVES & SONS, Ltd., Milton-under-Wychwood, Oxon.

ASSISTANT WORKS MANAGER Required for Thermal Insulation Works in the Mitcham area. Experience of joinery work essential, some knowledge of sheet metal work desirable. Man having had experience of joinery and metal work in shop-fitting industry might suit.—Write in first instance stating age, experience and salary required, to Box 1661, "The Builder."

JOINERY. Manager Required by Company with Joinery Works in London and Herts. Aged 35-45. Management experience similar post essential. Good and progressive salary with Company car. Pension Scheme and other attractive conditions.—Write, in first instance, to Box 1716, "The Builder."

WANTED, first-class Industrial Painting CONTRACTS MANAGER. Must be able to measure and estimate. Salary £1,000 per annum. Car provided. Excellent prospects for right man.—Box 1669, "The Builder."

ADDITIONAL BUILDERS
CONTRACTS MANAGER

aged 35/45 required for old established medium sized Builder and Contractor, South Manchester, previous experience in similar position essential, permanent and pensionable after satisfactory service. Car provided. Salary range £1,050/1,250 according to experience and ability. Write in confidence with full particulars to
Box No. 1678, "The Builder"

CLERKS OF WORKS

CLERK OF WORKS Required for extensions to Trinity College, Carmarthen, from 31st October, 1960 for approximately 20 months. Salary £1,200 to £1,400 according to experience.—Apply ARCHITECTS' CO-PARTNERSHIP, 44 Charlotte-street, London, W.1.

MANCHESTER. Experienced CLERK OF WORKS for Industrial Contract for period 18 months to 2 years. Salary £1,200 per annum.—Box 1421, "The Builder."

CLERK OF WORKS Required beginning of November for alterations and extensions to Departmental Store premises, costing approximately £220,000, at Carr-street, Ipswich, for the Ipswich Co-operative Society, Ltd. Contract approximately 18 months. Candidates must have a thorough knowledge of the building trade, be conversant with Drawings and Bills of Quantities, competent to supervise works, maintain records and prepare weekly reports. —Applications, stating salary required, age, experience and reference, to R. C. Steel, A.R.I.B.A., Chief Architect, C.W.S., Ltd., 99 Leman-street, London, E.1.

BUYERS

BUYER wanted by Contractors, Middlesex area. Must have good knowledge of building construction as well as of all materials and be used to keen buying. Excellent salary and first-class prospects of advancement.—Write for interview, stating age and brief particulars of experience to Box 1434, "The Builder."

BUYER Required for Building and Civil Engineers' office in Birmingham, to take sole charge. Must be fully experienced.—Apply, giving full details of experience and salary required, to Box 1533, "The Builder."

BUYER for London office of Civil Engineering Contractors. Initial position is as Senior Assistant to Chief Buyer. Must have good knowledge of materials for road and sewer department and be able to work on own initiative. Permanent position. Good prospects. Opportunity given to carry out site pre-tender investigations.—Write details and salary to Box 1536, "The Builder."

BUYER Required for head office of medium-sized, progressive Building and Civil Engineering Contractors operating mainly in the South West. Applicants must have knowledge of B.O.Q., drawings and office routine and should be employed elsewhere in a similar capacity, although consideration will be given to assistant buyers in a large organisation.—Apply, in strict confidence to the Managing Director, giving details of age, experience and salary required, DEVON CONTRACTORS, Ltd., Venny Bridge, Whipton, Exeter. Telephone Exeter 66216/8.

BUYER/PROGRESS CHASER. Opportunity for technically-minded man exists within this Company. —Apply C.I.L. (SHOPFITTERS), 139-149 Fonthill-road, London, N.4.

LAING HOUSING COMPANY LIMITED
has vacancies
for
Assistant Buyers

Good prospects within an expanding organisation, including a Pension Scheme and other progressive benefits.

Applications in writing, giving brief details of past experience to Personnel Manager (L.H.B.5), **John Laing and Son (Holdings) Limited, London, N.W.7.**

BUYER

(Building and Civil Engineering Industries)

SCOTTISH SPECIAL HOUSING ASSOCIATION LTD.

invite applications for the superannuable appointment of BUYER at an annual salary of £1,450. Candidates must be keen and energetic and have sound administrative ability, allied to extensive experience of large-scale bulk buying for the building and civil engineering industries, including multi-storey flats. An intimate knowledge of all materials used in the building and civil engineering industries and of their markets and available sources is essential. A house to rent in Edinburgh is available if required.

Application forms obtained from the **Secretary, 15/21 Palmerston Place, Edinburgh.**

REPRESENTATIVES

EXPERIENCED REPRESENTATIVES,

already calling on woodworking trades and large timber users, required in various areas to sell established line, with large and rapidly expanding potential, of heavy duty fastening equipment, including consumable fasteners. Exclusive territory and generous commission terms offered. State age, experience, territory covered to

Box No. 947, "The Builder"

SS LIMITED invite applications for the position of

SALES REPRESENTATIVE

for WARKS./WORCS./SHROPS./STAFFS.

Our clients, who are a nationally known and well respected manufacturer of Building Products, Require a Representative in the above area, preferably resident near Birmingham. Candidates must have experience in selling to the Building Trade, Architects, Contractors, etc. Remuneration is by means of a good basic salary and commission which yield a well above average income. A car is provided. Applicants, aged 25-45 are invited to apply for this excellent opportunity.

Candidates should quote reference "NA" when applying in confidence to:
SALES SELECTION LIMITED,
Victoria House, London, W.C.1.

REPRESENTATIVES. Are you already calling on Builders, Estate Developers and Builders' Merchants in London and the Home Counties, and seek an opportunity to increase your income by carrying an additional competitive line? Generous commission and no administrative work involved.—Write, Box 1205, "The Builder."

TOWER Crane Agency looks for TECHNICAL REPRESENTATIVE. Knowledge of Building industry essential. Progressive post which offers scope to a keen energetic man aged 28/40. Willing to travel.—Fullest details with recent photograph, please, to Box 1518, "The Builder."

BUILDERS' ASSISTANTS

ASSISTANT Required in Contracts Materials Department. Experience in all types of building and civil engineering drawings an advantage. Must be able to take-off materials for ordering purposes from drawings and bills.—Write, stating age, experience, salary required, M. J. GLEESON (CONTRACTORS), Ltd. (Estates Dept.), Haredon House, London-road, North Cheam, Surrey.

ASSISTANT in Contracts Department Required. Young man up to age 25 years for training in Contracts Department of expanding Company. Excellent prospects for right applicant.—Write R. DURTNELL & SONS, Ltd., Brasted, nr. Westerham, Kent.

BUILDERS' ASSISTANT. Holborn. Take charge under directors. Old-established. Write fully, age, experience, salary required. Opportunity for right man. Contracts up to £100,000.—Box 1600, "The Builder."

ASSISTANT Required in busy builder's office, Hounslow. Preparation of accounts. Knowledge of estimating and surveying essential.—Write, stating age, experience and salary required, to ROGER MILLER & CO., Ltd., 12 Pownall-gardens, Hounslow. HOU 5712.

BUILDER'S ASSISTANT Required for East Surrey to supervise work in that area under General Manager, the work consisting mainly of high-class alterations, decorations, additions and architect-designed houses. Applicants with the necessary experience should aoply giving full particulars in confidence to Box 1614, "The Builder."

STRUCTURAL ENGINEERING ASSISTANT

required with experience in the design and detailing of steel structures and having some knowledge of reinforced concrete work—minimum qualifications Grad. I Struct.E., or equivalent. The post is pensionable, subject to medical examination. Five day week in operation. Applications giving age, details of previous experience, qualifications and salary required to:

G. S. Hay, F.R.I.B.A.,
Chief Architect,
CO-OPERATIVE WHOLESALE SOCIETY LIMITED,
1 Balloon Street, Manchester 4.

ASSISTANT

Male, for Premises Department

must be willing to travel in the provinces and be able to prepare schemes, specifications, carry out surveys and be a good draughtsman. Knowledge of Shop-front design an advantage. Good commencing salary with Pension Plan. Please write giving fullest particulars of age, experience, etc. to

Personnel Manager.
The National Cash Register Co. Ltd.
206-216 Marylebone Road, London, N.W.1.

ASSISTANT Required for Builder's office, able to estimate, London area. Write stating age and salary required.—Box 1675, "The Builder."

JUNIOR BUILDER'S ASSISTANT Required by firm of Decorators and Jobbing Builders in N.W. Middlesex area, to drive light van and assist in office duties. Good prospects of advancement.—Box 1664, "The Builder."

ENGERT & ROLFE Ltd.

require in their Contracts Department, the following:—

(1) An ASSISTANT proficient in dealing ing with the preparation of estimates, the taking of site measurements and the preparation of accounts.

(2) An ASSISTANT proficient in the supervision and handling of labour in asphalte and built-up felt roofing.

Salary according to experience. Pension scheme.—Applications in writing to the Contracts Manager, ENGERT & ROLFE Ltd., Barchester-street, London, E.14.

AGENTS

AGENT/SURVEYOR Required for building project in Derbyshire. Must be fully experienced in all aspects of construction including Roads and Sewers and be able to measure Subcontractors up to final account. Excellent opportunity for the right man with expanding London Contractors.—Write, giving full details and salary required, Box 1530, "The Builder."

STREETER'S LTD.

AGENTS

required for Flat Development scheme in Guildford. Experience in road works advantageous. Good salary, bonus and opportunity to join expanding company covering wide field building contracts. Staff pension scheme available after 6 months service. Full details of experience and names previous employers.

STREETER'S, HAMPTON, MDX.

A leading Firm of London Consultants has been engaged to assist in the appointment of a

SENIOR AGENT

for a large internationally known company of engineering contractors.

Previous experience must include an outstanding commercial record in controlling large scale contracts involving all engineering aspects.

These contracts may be situated in any part of the world over the next five to ten years and after that will lead to top executive positions in the London Head Office.

Initial starting salary in the U.K. £3,000 per annum.

Write giving fullest details to:

Mr. K. LLoyd, Austin Knight Ltd.
Incorporated Practitioners in Advertising,
212a, Shaftesbury Avenue, London, W.C.2.

SIR LINDSAY PARKINSON & CO., Ltd., Require AGENTS and GENERAL FOREMEN for speculative housing and flat contracts.—Please reply stating trade and experience to Housing Director, 6 Lambeth-road, S.E.1.

STAVERTON CONTRACTORS (WALES) Ltd. Require the services of an AGENT/GENERAL FOREMAN for a large contract in the Swansea area. Must be used to reinforced concrete construction and handling contracts to the value of £150,000. Continuity of employment for the successful applicant, who will, after a probationary period, be invited to participate in our profit-sharing and superannuation schemes.—Write, giving fullest possible details, to The Contracts Manager, STAVERTON CONTRACTORS (WALES) Ltd., Imperial Buildings, 69-74 St. Mary-street, Cardiff.

SENIOR AGENT Required. Experienced in reinforced concrete work.—Apply, Contracts Manager, BERNARD SUNLEY & SONS, No. 4 Area Office, Crown-road, Morden, Surrey.

AGENTS
(BUILDING)
MIDLANDS AREA

For a leading Building and Civil Engineering Company with an expanding organisation.

Must have carried out large scale contracts including concrete framed multi-storey structures.

Able to adhere to progress schedules and be conversant with planning procedure.

High salary, superannuation and profit sharing scheme.

Brief particulars to be sent in confidence to :

J. Wright, Director,
C. Bryant and Son Limited,
Small Heath, Birmingham 10.

AGENT REQUIRED

for very large contract in the London area. Applicants must have considerable experience in major works involving extensive reinforced concrete construction. Substantial salary is offered, together with bonus. Applicants must have ability to ensure successful production and only those with experience in supervising large contract of this type will be considered.

Apply in writing, stating age, details of experience, etc.

M. J. GLEESON (CONTRACTORS) LTD.,
Haredon House,
London Road, North Cheam, Surrey

SITE AGENT

required for multi-storey and industrial development in the Southport and Liverpool area; applicant must be fully experienced in this type of work and in particular reinforced concrete construction. Apply in writing, stating age, previous experience and salary required to :—

Box No. 1545 'The Builder'

FOREMEN AND SUPERVISORS

FIRM of National Building Contractors Require first-class reinforced concrete GENERAL FOREMEN for work in Northern area. Permanent and pensionable positions for right applicants.—Apply to Box 905, "The Builder."

GENERAL FOREMEN Required for sites in and around Home Counties. Should be fully experienced in House and Flat construction. Excellent opportunities exist for the right men.—Write, giving details and salary required, Box 1531, "The Builder."

SUPERVISOR wanted by expanding London Contractors. Should be fully conversant with all types of House and Flat construction and Roads and Sewers. Successful applicant will take control of several contracts under direct contact with Constructional Director. Excellent opportunity for the right man. Car supplied. Pension scheme.—Write, giving details of past experience and salary required, Box 1532, "The Builder."

GENERAL FOREMAN Required, Housing contract Berkshire. Full experience necessary.—Box 926, "The Builder."

SOUTHERN COUNTIES CONTRACTORS wish to receive particulars from thoroughly experienced GENERAL FOREMEN for contracts commencing 1960/61. This is a good opportunity for the right men to obtain permanent employment in a well organised company.—Apply, giving full particulars of past experience, in strict confidence, Box 938, "The Builder."

CONTRACT SUPERVISORS

Two Contract Supervisors required for busy N.W. London Building Contractors. Essential Qualifications: Practical experience in site supervision of several contracts running concurrently (£10,000—£50,000 each). Ability to control own labour force and Sub-Contractors.

Applicants should have drive and initiative and capable of a profitable contribution towards an expanding Contract organisation. Car provided.

Reply giving full details of experience and salary required to:

Box No. 1535, 'The Builder'

E. S. GATES, LTD.

invite enquiries from

GENERAL FOREMEN

possessing drive and initiative.

Written applications only to

E. S. GATES, LTD.,
Chalfont Station Road,
Amersham, Bucks.

GENERAL FOREMAN

£25 PER WEEK AND BONUS

required for multi-storey flats contract in East London. Preferably a Carpenter by trade. Apply in the strictest confidence, stating age, experience, and all relative details to

Box No. 1624, "The Builder"

GENERAL FOREMAN

We have two vacancies in the Midlands area for General Foreman to take charge of large Building Contracts. Previous recent experience in such a position essential, no others will be considered. Permanent position with good salary and conditions to suitable applicant.

Apply to

Wilson Lovatt & Sons Ltd.,
Clarence Street,
Wolverhampton

GENERAL FOREMAN Required. Manchester area initially, but must be willing to travel. Must be fully experienced. Permanent and pensionable post. —Write full details of experience, age and salary required, to Box 1543, "The Builder."

FOREMAN PAINTER Required. Manchester area, for Industrial Contract. Only fully experienced men with initiative need apply.—Write, full details of age, experience, and salary required, to Box 1542, "The Builder."

GENERAL FOREMAN for new Church contract, S.E. London. Carpenter preferred.—Apply, giving full particulars, age, experience and salary required, to Box 1500, "The Builder."

GENERAL FOREMAN Required for high-class housing development in the Berkhampsted area. Permanent pensionable position.—Apply, Box 1501, "The Builder."

2 CONTRACTORS AGENTS or SENIOR GENERAL FOREMEN

required for large municipal flat contracts, Shoreditch and Woolwich.

Apply

Richardson, Herbert House,
Slade Green, Erith.

A. J. WAIT & CO., LTD.

require

GENERAL FOREMAN

with experience in reinforced concrete construction in various parts of the Country, must be fully capable of accurate setting out.

Apply in confidence, with particulars to:—

Contracts Manager,
Wellington Crescent,
New Malden, Surrey.

SENIOR GENERAL FOREMAN

of integrity required by builder with reputation for high class work. Must have good organising ability, be capable of running several housing estates simultaneously. This appointment is permanent and carries a salary with bonus of well over £2,000 per annum. Car provided and housing available.

Reply in writing in first instance, stating age and brief details of experience to

Box No. 1668 "The Builder"

WORKING FOREMAN CARPENTER AND JOINER Required by West London Building Contractors, for small contracts. Able to take charge. Permanency for right man.—Please apply in writing giving age and salary required, to Box 1552, "The Builder."

GENERAL FOREMAN Required for contract in North London. Permanency for man with ability and drive.—Please state age, trade, experience, salary required, etc., to Box 1499, "The Builder."

BUILDING STAFF

BRIGHTON, SUSSEX

required for large contract starting shortly.

GENERAL FOREMAN

as section Foreman.

CONCRETE FOREMAN

experienced in economic production of quality concrete and modern machinery, for mixing and placing.

CASHIER & WAGES CLERK

experienced in P.A.Y.E. and general duties

TIMEKEEPER

MATERIALS CHECKER & STORES CLERK

QUANTITY SURVEYOR

for general measuring, valuations, etc.

All the foregoing will be under control of Site Agent, positions are permanent for the right man and, subject to age, can be pensionable.

Apply with full details to

Box No. 1615, "The Builder"

LOWTON CIVIL ENGINEERING LIMITED

SENIOR GENERAL FOREMAN/AGENT

required for building and civil engineering Contract on the South Coast. First-class conditions with expanding company for energetic, capable man. Write in the first instance giving details of experience, salary required, date available to

LOWTON CIVIL ENGINEERING LIMITED,
55 Minster Street, Reading, Berkshire.

JOINERY SUPERVISOR Required by Manufacturers of high-class joinery, North West area. Ability to produce site work economically consistent with quality essential. Interesting, progressive post for men with initiative. Pension scheme.—Send full details of experience, age and salary required, to Box 1541, "The Builder."

BRIGHTON, SUSSEX. SENIOR GENERAL FOREMAN Required for important 2-year contract. First-class qualifications and references will merit high-level salary.—Write, in first instance, with complete details of experience and copies of references, to Box 1511, "The Builder."

WIMPEY

BUILDING GENERAL FOREMAN

required for large site organisation in LONDON and the HOME COUNTIES. Applicants must be tradesmen and have had experience in controlling work in one or more of the following classes of building :—

Industrial Developments Multi-Storey Flats Non-Framed Flat Construction Speculative Housing.

Permanent appointments, with good initial salaries and opportunities for promotion. Contributory pension scheme.

Applications, giving age and experience to :

GEORGE WIMPEY & COMPANY LTD.,
27, Hammersmith Grove, London, W.6.
Ref. 81B.

General Foremen

required for large housing Contracts at Hemel Hempstead, previous experience in this type of work required. Prepared to pay good salary for the right men. Apply giving details of previous experience, age, salary etc. to

The Secretary,
C. Miskin & Sons, Ltd.,
Romeland House St., Albans.

HASTINGS
GENERAL FOREMAN

For housing development. Must be competent to set out and supervise construction of domestic dwellings and capable of dealing with sub-contractors.

Write stating full particulars to
A. E. A. PROWTING LIMITED,
Bury Street, Ruislip,
Middlesex.

GENERAL FOREMAN Required, experienced in reinforced concrete, for work on South coast.—Apply Contracts Manager, BERNARD SUNLEY & SONS, No. 4 Area Office, Crown-road, Morden, Surrey.

FOREMAN WOODWORKING MACHINIST Required by old-established Yorkshire firm engaged on high-class bank work. Applicants must be fully experienced, able to operate all machines and control labour. Accommodation available after trial period.—Apply WM. NICHOLSON & SON (LEEDS), Ltd., P.O. Box 113, Leeds, 10.

SUPERVISOR Required for small Contracts in East London and Essex area. Only men with initiative and drive need apply. Must be car driver.—Give full particulars, age, experience and salary required, to Box 1569, "The Builder."

TWO Working GENERAL FOREMEN Required (one carpenter, one bricklayer) immediately to take charge of small contracts in East London area.—Apply giving full particulars, age, experience and salary required, to Box 1568, "The Builder."

BUILDING SUPERVISORS Required for varied and interesting general building and contracting work. Excellent prospects to progress with this expanding group of companies.—Apply, WRAIGHT, Ltd., 23 London-road, Sittingbourne. Tel.: 666.

GENERAL FOREMAN Required for contract for 36 flats Ilford area.—Apply in writing stating age, experience and salary required, to HAMMOND & MILES, Ltd., Scrafton-road Works, Ilford.

GENERAL FOREMAN and TRAINEE GENERAL FOREMAN Required. South side London area.—Written details, experience, age, salary, etc., to T. RINGHAM & CO., Ltd., 4 The Broadway, S.W.19.

CONTRACTS SUPERVISORS Required for Building Contracts in Southern England. Value of contracts range from £1 to one million. Permanent appointments with good prospects and top salary; bonus and superannuation schemes in operation.—Applications to Personnel Manager, T. G. CONSTRUCTION CO., Ltd., Ettingshall, Wolverhampton.

TOP-CLASS GENERAL FOREMEN Required for medium- and large-sized building contracts in Southern England. High calibre men required for good salary with bonus scheme in operation.—Apply to Personnel Manager, T. G. CONSTRUCTION CO., Ltd., Ettingshall, Wolverhampton.

GENERAL FOREMEN Required immediately for large school contracts in the Stevenage and Letchworth areas. Preference given to foremen who have done similar work. The position carries good salary and conditions.—Apply, JOHN WILLMOTT & SONS (HITCHIN), Ltd. 'Phone, Hitchin 3771.

ASSISTANT GENERAL FOREMAN, to work under supervision, on housing estate, setting out, levelling, etc., supervising labour. Reasonable salary and good prospects for permanent position.—Apply, in writing, Managing Director, FITTED HOMES GROUP, 225 Frimley Green-road, Frimley Green, Nr. Aldershot, Hants.

PROMINENT FIRM of Acoustic Ceiling Manufacturers and Contractors Require experienced Contracts Supervisor to operate from London office. Car is provided.—Box 1613, "The Builder."

GENERAL FOREMAN Required immediately for progressive company in Surrey, to take charge of new housing sites. 4-figure salary.—Applications, giving details of experience, age, etc., to Box 1609, "The Builder."

GENERAL FOREMEN Required for contracts in North West area. Permanency for the right men.—Apply, in writing, giving details of training, experience, age and salary required, to J. JARVIS & SONS, Ltd., 77 Dane-road, Sale, Cheshire.

SHOPFITTING SUPERVISOR Required by Multiple Shop Company.—Apply G. K. Deighton, RADIO RENTALS Ltd., Seymour Mews House, Wigmore-street, London, W.1. WEL 9191.

GENERAL FOREMAN Required for extensive alterations Contract near Amersham, Bucks.—Full particulars as to previous experience and employers, etc., to E. S. GATES, Ltd., Chalfont Station-road, Amersham, Bucks.

GENERAL FOREMAN Required for Contract in the London area for new Church and Convent. Must be capable of carrying out works up to £100,000.—Write stating references and salary required, to Box 1651, "The Builder."

WANTED immediately, GENERAL FOREMAN for large private housing estate near St. Albans.—Apply stating age, experience and salary required, to Box 1680, "The Builder."

SENIOR GENERAL FOREMAN Required for London and Midlands, experienced in reinforced concrete multi-storey construction. Good conditions, pension scheme operating.—Apply in writing giving details of experience to date to Box 1670, "The Builder."

AN experienced Civil Engineering GENERAL FOREMAN Required for road and sewer contract in London. Good conditions, pension scheme operating.—Apply in writing giving details of experience to date to Box 1671, "The Builder."

GENERAL FOREMAN for Flat Modernisation Contract, Herne Hill, commencing November. C&J. preferred. Contract value £20,000.—BARRY HIGH, Ltd., Cranborne-road, Potters Bar, Middlesex. Potters Bar 5471.

OUTSIDE SUPERVISOR Required by West London Building Contractors, capable of handling men, mainly for jobbing and alteration works.—Write, stating age, experience and salary required, to Box 1709, "The Builder."

GENERAL FOREMAN Required for large Teachers' College at Balls Park, Hertford. Applicants must be experienced in good-class work.—Reply, stating age, trade, experience, previous employers and salary required, to the Secretary, C. MISKIN & SONS, Ltd., Romeland House, St. Albans.

CARPENTERS AND JOINERS

CARPENTER AND JOINER. Fully experienced man Required for work in the Middlesex and West London area. Able to carry out good-class repairs and jobbing, also small building works. Capable, trustworthy applicants. Permanency for right man. Write stating age, experience and wages required.—Replies Box 1553, "The Builder."

JOINERY WORKS Require experienced SETTER-OUT with prospects of becoming Chief Setter-out. Applicant must be aged approximately 35 and have had previous experience in this capacity and especially with shopfitting work. Good salary, pension scheme.—Write full details GROVE STORE-FITTERS, Bangor-road, Brentford, Middlesex.

FLOORING. Vacancy occurs in Contracts Department of West End Contractor for ASSISTANT. Knowledge of Timber an advantage. Excellent prospects and superannuation.—Apply, giving details of experience and salary required, to Box 1712, "The Builder."

CLERKS

CLERK Required by A.B.C.D. (RAYNES PARK), Ltd., Alpha-road, Surbiton, for duties connected with production and stock controls. Applicants should have previous experience of this type of work, and a knowledge of the Building Trade will be an advantage. Excellent prospects, pension and bonus schemes operate.—Apply, in writing, to above address.

SENIOR COSTING AND INVOICE CLERK Required for Specialist Contractors' office in N.W. London area. Experience in Contractor's Cost records essential. Permanent job with good salary and excellent prospects.—Apply stating age and details of past experience to Box 912, "The Builder."

SITE CLERK for Road and Sewer Contracts in London area. Permanent and pensionable for right man.—Apply stating age, experience and salary required, Secretary, FITZPATRICK & SON (CONTRACTORS), Ltd., 455 Old Ford-road, London, E.3.

CLERK for Builder's General Office, Costing, Invoices, etc. experience preferred but not essential. Opportunity for advancement.—Write full particulars, age, salary required, etc., to Accountant, W. H. GAZE & SONS, Ltd., 19/23 High-street, Kingston-on-Thames.

PRIME COST CLERK, with knowledge of building and civil engineering contracts. Required by London firm of Chartered Quantity Surveyors.—Write stating age, experience and salary required to Box 1591, "The Builder."

JOINERY INVOICE CLERK Required. Knowledge of Bills of Quantities and plans essential. Progressive position. Pension scheme.—W. H. GAZE & SONS, Ltd., The Gazeway, Portsmouth-road, Thames Ditton. Emberbrook 5511.

BOOK-KEEPER/ACCOUNTANT Required by small but progressive Contractors' Plant business in the S.W. London area. Successful applicant will be required to attend to general accountancy matters and take full responsibility for this section of the business.—Write, please, in first instance, giving full particulars, to Box 1495, "The Builder."

DICTAPHONE TYPIST Required. Interesting top-grade position. Canteen facilities. Salary commensurate with ability and experience. Also required experienced COPY TYPIST. Must be capable and a conscientious worker.—Apply, HAYMILLS (CONTRACTORS), Ltd., Empire House, Hanger Green, Western-avenue, W.5 (near Park Royal Station on bus routes 105 and 187).

COST CLERKS.—RICHARD COSTAIN Ltd., have vacancies for COST CLERKS to work on Civil Engineering contracts. Preference will be given to candidates studying for I.C.W.A. qualifications. Young men, aged 20-30 who are seeking interesting posts with excellent prospects and who are prepared to work on site are invited to apply to: Assistant Personnel Officer, 111 Westminster Bridge-road, London, S.E.1.

COST CLERK Required for Building and Civil Engineering Contractors at Crouch End, N.8. Must be experienced.—Write, or telephone, CAWOOD WHARTON & CO., Ltd., 75 Crouch Hall-road, N.8. MOUntview 3477.

JUNIOR Required for clerical duties and as assistant to Surveyors in busy maintenance contracts department. Applicants should have keen interest in the building industry. Progressive position.—Write, stating age, experience and salary required, to Secretary, WHYATT (BUILDERS), Ltd., 225 Streatham High-road, S.W.16.

COST/BONUSING CLERK Required in connection with costing of industrial flooring contracts. Permanent position, salary £700 per annum, non-contributory pension scheme operating.—Write fully, age, experience, etc., to E. J. Elgood, Ltd., Yeoman-st., S.E.8.

CASHIERS WAGES CLERKS/ TIMEKEEPERS

Vacancies on several Contracts in the Midlands area for fully trained men in the above positions. Applications stating fullest personal details and training, to,

Wilson Lovatt & Sons Ltd.,
Clarence Street,
Wolverhampton

BUILDERS' CLERK

to assist generally in Surveyor's Department of busy Contractor's Office. Opportunity to gain experience working with Surveyors and possibly with training take over the duties of Assistant Surveyor. Write giving full details of experience and salary required to :—

E. J. Lacy & Co. Limited,
Steele Road, N.W.10.

OVERSEAS APPOINTMENTS

Prepaid rate, 24 words, 8/6; additional 6 words, 2/-. Box number, including Forwarding Replies, 2/-.

TAKERS-OFF, Australia, Sydney and Melbourne. Experienced Takers-Off Required for three-year contracts, £A1,900, £A2,000, £A2,100, plus considerable overtime at time-and-a-half, bonus on completion of contract. Fares to Australia paid. Perfect working conditions. Extra holidays. Continuation contract may be obtained.—Box 1370, "The Builder."

REQUIRED FOR LAGOS, NIGERIA
QUANTITY SURVEYOR

Applicants should be between 28/40 and experienced in building estimating, quantities, measuring, valuations and final accounts. Advantageous to know how to estimate for civil works and must be experienced in controlling variations and dayworks. As there are prospects of promotion to Chief Surveyor, a professional man experienced in contracting would be given preference.

The tour of duty is 18 months plus 3 month's leave on full pay. Good salary, bonus and conditions including furnished accommodation, return fares for applicant, wife and family, car allowance, etc. There are no education facilities for children over 7 years.

Write, in confidence, stating qualifications, experience, family and salary required to:

Advisory Service for the Building Industry, 82, New Cavendish Street, London, W.1

CHARTERED QUANTITY SURVEYOR AUSTRALIA

One of Australia's largest Construction Companies, operating throughout the Continent, have a vacancy for an experienced Chartered Quantity Surveyor at Melbourne, Victoria.

The position is one of responsibility and a commencing salary in the vicinity of £A2,500 will be discussed. There are excellent prospects for advancement and the Company operates a Superannuation Scheme.

A furnished house will be provided for the successful applicant (upon his arrival in Australia), and rental in excess of £A5 per week will be subsidised for the first six months.

Arrangements will be made to transport the successful applicant and his family under the assisted migration scheme, flying them out if possible. The migration fee will be paid by the Company.

Those interested should apply, stating experience, qualifications and age, to:

"SURVEYOR",
W. D. SCOTT & CO. LTD.
12 Thayer Street,
London, W.1, England.

TAYLOR WOODROW GROUP

require

AGENTS

for Building and Civil Engineering contracts. Candidates between 30 and 45 years of age must have had at least five years experience in a similar position on large projects.

A Degree or other similar qualification is desired. Tours, mainly in West Africa, will be from 12 to 18 months. Free furnished accommodation is provided. A good salary is offered and the position is pensionable.

QUANTITY SURVEYORS

Applications are invited from Quantity Surveyors between 25 and 30 years of age who have had a good basic training with contractors.

Candidates must be prepared to work initially in the United Kingdom. After a period they will be expected to go overseas for short visits or full tours of 12 to 18 months.

A good salary is offered and the position is pensionable.

Applications in strict confidence to be made to:

Personnel Manager,
Taylor Woodrow (Overseas) Limited,
Western House, Western Avenue,
Ealing, London, W.5

SYDNEY, Australia. A vacancy occurs for experienced TAKER-OFF. Commencing salary £A1,900, excluding overtime. Fare paid.—Box 1371, "The Builder."

SYDNEY, Australia. Experienced TAKER-OFF Required, £A1 p.h., 50-hr. week, 1 yr. contract. Fares paid both ways.—Box 1372, "The Builder."

SYDNEY, Australia. Young TAKER-OFF with at least 10 years' experience in a Quantity Surveyor's office Required for 2-year contract. Commencing salary £A1,750. Return fares paid.—Box 1373, "The Builder."

AUSTRALIA, MELBOURNE and SYDNEY. Vacancies for experienced TAKERS-OFF. Salary up to £A2,500 including overtime and bonus. Fare paid.—Box 1374, "The Builder."

QUANTITY SURVEYOR (preferably single) experienced measuring on schedules Required for interesting work with professional office in Tanganyika.—Write, stating age, experience, salary required, etc., and when free to commence duties, to CULHAM & HUNTER, P.O. Box 805, Dar es Salaam, Tanganyika.

RESIDENT QUANTITY SURVEYOR Required for West African office of professional firm on work covering measuring, pricing and agreeing final accounts, etc. Free accommodation, transport and passages provided; 18 month tours. Age not under 25.—Apply stating qualifications and experience to Box 924, "The Builder."

EXPERIENCED QUANTITY SURVEYOR, preferably with some experience in a Contractor's office, Required by London Chartered Quantity Surveyors for post in Middle East. Tours of 18 months with paid leave between. Starting salary £1,800 p.a. while abroad plus free bachelor accommodation, messing, fares, etc. Probationary period of 3/4 months in London office at £1,200 p.a. plus L.Vs. before going abroad. Pensionable positions available in U.K. for suitable men on completion of service overseas.—Apply with full details to Box 1335, "The Builder."

CHARTERED QUANTITY SURVEYORS in Trinidad Require qualified ASSISTANT for varied duties including taking-off and final accounts. This is a job for a versatile, energetic man and particularly suitable for somebody who is anxious to increase his overall experience rapidly. Single man preferred. A salary appropriate to the cost of living, qualifications and ability will be paid.—C. T. R. KELLY AND PARTNERS, 8 Manchester-square, W.1.

ARABIAN GULF. QUANTITY SURVEYOR Required by professional firm. Eighteen-month tour with preliminary period in London office. Substantial salary with accommodation and car allowance provided. No local income tax. Bachelor preferred age over 25.—Apply, stating qualifications and experience, to Box 987, "The Builder."

QUANTITY SURVEYORS Require qualified men for offices in Sydney and Perth, Australia.—Write stating age, experience and salary required, Box 919, "The Builder."

SITUATIONS WANTED, ETC.

Minimum charge 3s. (24 words)
Each additional 6 words, 1s. Box number, Including Forwarding Replies, 1s. 3d.

PROVIDENT INSTITUTION OF BUILDERS FOREMEN and CLERKS OF WORKS
(established 1842)
CARPENTERS HALL, 28, AUSTIN FRIARS, LONDON, E.C.2.
(By kind permission of the Worshipful Company of Carpenters.)

CONTRACT MANAGERS, CLERKS OF WORKS, AGENTS and STAFF FOREMEN are invited to apply for membership of this Institution, which has for over a century granted pensions to members and their widows and so assist to maintain the status and promote the interests of supervisory staff in the Industry. Architects, Builders and Civil Engineers requiring efficient staff as above are requested to contact the

General Secretary,
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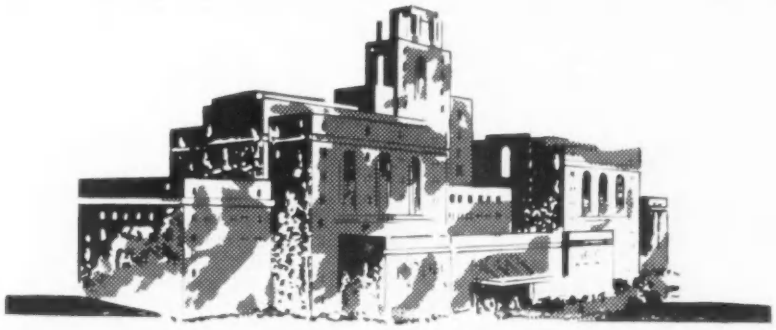

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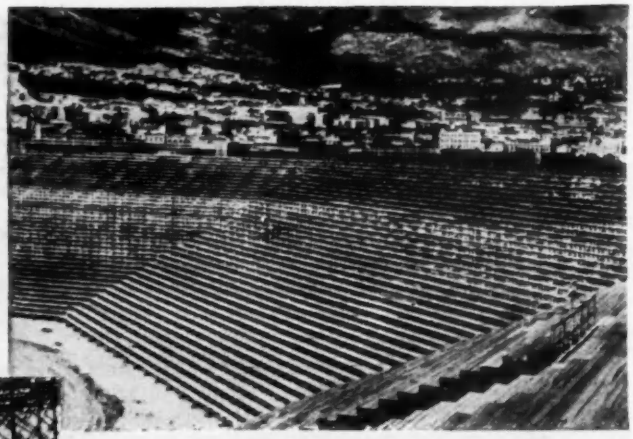

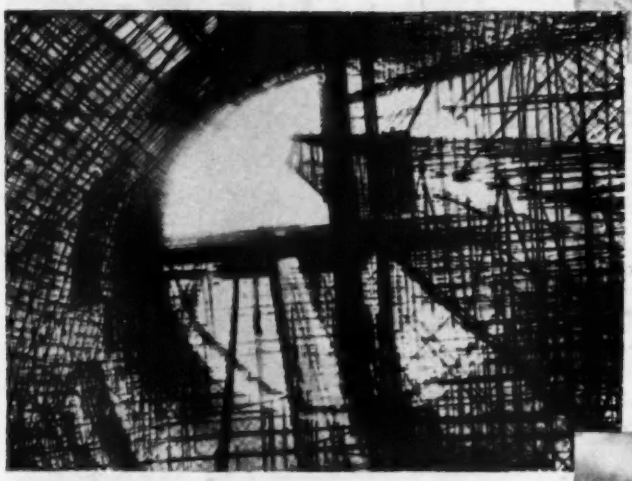

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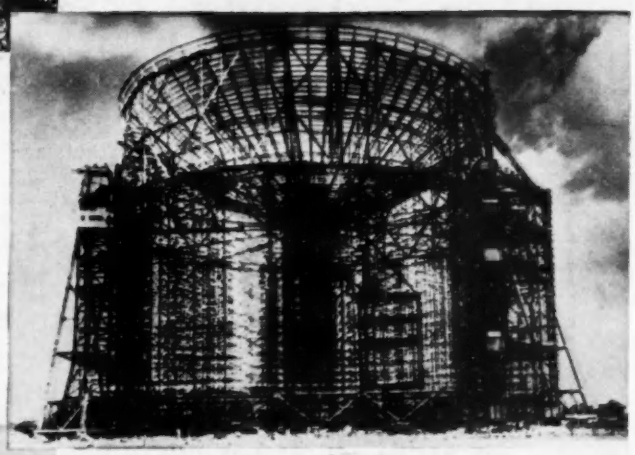

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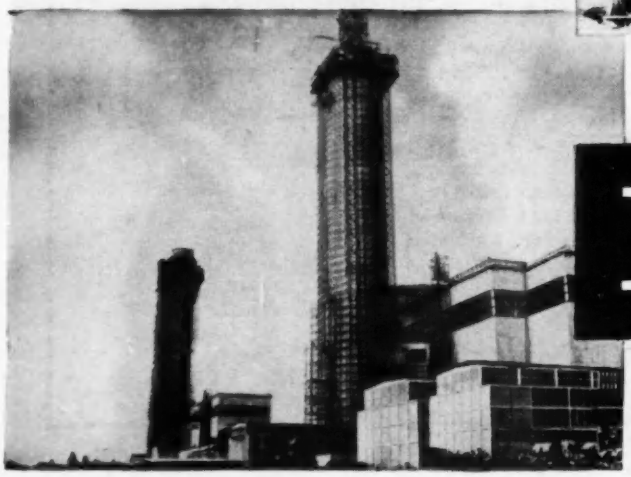

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